AN EXAMINATION OF CAUSES AND MANAGEMENT STRATEGIES OF CRITICAL CONFLICTS BETWEEN PUBLIC CLIENTS AND CONTRACTORS IN BUILDING PROJECTS IN TANZANIA

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AN EXAMINATION OF CAUSES AND MANAGEMENT STRATEGIES OF CRITICAL CONFLICTS BETWEEN PUBLIC CLIENTS AND CONTRACTORS IN BUILDING PROJECTSIN TANZANIA

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the award of the Degree of Master of Science in Construction Economics and Management of Ardhi University

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Ardhi University, a dissertation entitled ***"An Examination of Causes and Management Strategies of Critical Conflicts between Public Clients and Contractors in building projects in Tanzania"*** in partial fulfillment of the requirements for the degree of Masters of Science in Construction Economics and Management of the Ardhi University.

…….

Dr. Stanslaus K. Ntiyakunze

(Supervisor)

Date……

DECLARATION AND COPYRIGHT

I, **MLAY, Upendo S** declare that this dissertation is my own original work and that it has never been presented to any other University for a similar or any other degree award.

Signature …….

ACKNOWLEDGEMENT

First and foremost, I would like to convey my heartfelt thanks to all people who in one or another way played part to the completion of this dissertation. My first and foremost heartfelt thanks are directed to God who is source and owner of my life without whom the dream for having this dissertation written and completed would have been a far-fetched one.

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DEDICATION

This dissertation is dedicated to my adored father Sabakitan S.Mlay and to my adore mother Anaisaria E. Mlay and my fiancé Ntide Dady who spared neither a single cent nor a word of wisdom and encouragement to help me realise my full potential. I also dedicate this dissertation to my gorgeous daughter Precious Angel Dady as an inspiration for her to achieve and outdo this academic landmark.

ABSTRACT

Construction industry is sensitive to conflicts which deter the development of the industry. The effects of conflicts in construction include abandoning and failure of finishing of private and public construction projects which later on require huge amount of money and time to be revived. Above other participants of building projects, clients and contractors have been subjected to frequently eruption of conflicts among themselves, hence devoted measures of resolving conflicts are needed for the wellbeing of the industry. Therefore, the primary focus of this study istoexamine causes of conflicts that occur between public clients and contractors in building projects with three research objectives which are to identify factors that lead to conflicts between public clients and contractors in building projects in Tanzania, to determine strategies used to resolve conflicts between public clients and contractors in building projects in Tanzania and to recommend how conflicts issues between public clients and contractors in building projects can be prevented and reduced in Tanzania. In order to attain its main objective, the study is organised into two main parts. The first part is empirical investigation that involved literature review, questionnaires and interviews and the second part is bystudying real contexts of building projects that involved studying of three case studies. It is found in questionnaires thatconflicts between public clients and contractors occur frequently due to improper planning and schedulingthan other factors. Likewise, conflicts in selected case studies building projects were caused byimproper planning and scheduling which led to delay in payment. In resolving conflict, it is found that most contractors and public clients use integrating and compromising approaches. It is recommended that public clients and contractors must have clear early negotiationsand should carry out accurate planning before embarking on actual construction activities.

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LIST OF ABREVIATIONS

AQRB	Architects and Quantity Surveyors Registration Board
CRB	Contractors Registration Board
GDP	Gross Development Product
PAT	Principal Agent Theory
PPRA	Public Procurement Regulatory Authority
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter introduces the study which specifically sought to examine conflicts issues between public clients and contractors in building projects in Tanzania. It presents background that contextualizes the research problem. It further states research problem, the objectives of the study, research questions, significance of the study, scope of the study and methodology.

1.1 Background of the study

Across the world, construction industry has widely been regarded as one of the pivotal mechanism of enhancing economic development and achievement of aims of different countries(Hillebrandt, 2000). Basically, for prosperity of any nation, construction industry is quintessential as any piece of infrastructure or real estate erected around us is undertaken by segments under construction industry. Having realized that, the industry has become an investment-led sector where government shows high interest. Government contracts with construction industry to develop infrastructure related to health, transport as well as education sector (Navon, 2005).

Despite the crucial role of construction in economic development, Yates (1998) put forward that since Second World War, construction industry has been reported to have weaknesses and scholars have proposed measures to improve the industry. In recent years, a common and increasingthemeof thiscriticismis the adversarial and confrontational culturethatexists between the various participants inthe construction

processing particularly between the client (and consultants on his behalf) and the contractor. In relation to thisLove, Davis, London, & Jasper, (2008) argued that conflicts and disputes seem to be a never ending story within the construction industry.

Previous studies indicate that conflicts are virtually ensured in building and construction industry due to its complex nature (Love, Davis, London, & Jasper, 2008, Ntiyakunze, 2011). This is due to the fact that,daily operations in construction industry significantly depends on the presence of and interactions among and between client/ financier, consultants (architect, engineer, quantity surveyor etc.), general contractor, subcontractors and material suppliers who form a society with a complex set of interrelated relationships. Among these participants, Langford, et al (1992) argued that each participant in a project has individual aims that could be in conflict with the aims of the project they are working on. Furthermore,Ambrose and Tucker (1999) argue that, thetemporary nature of construction projects and their multi-organizational structure make them prone to conflicts. As a result, McManamy (1994), opined that conflicts are almost unavoidable in construction industry and there are many terms used to define and describe these problems, such as delay in delivery, increased project cost, reduced productivity, loss of profit, or damaged professional or business relationship.

According to Pinnell (1999), conflicts and disputes in building construction tends to include various stakeholders within the industry, mostly it occurs between, clients and contractors, consultants and contractors, contractors and suppliers, contractors and employees, and so on. In the same line, Roxene (1998) stated that in a typical

construction project, the owners, donor agencies, project managers, field engineers, general contractors, subcontractors, and suppliers are the primary stakeholders. So when disputes arise in a construction project, some or all of the stakeholders are the dispute parties. Without exception, disputes involve misunderstandings, conflicting solutions on the issues, and communication dynamics between the parties.

Construction conflicts have many causes according to the point of view of each participant within any construction project. According to Elnzintand Mohamadien(2016), it may start with a simple reason and lead to a substantial set of interrelated complex disputes in the contract agreement.Similarly, Elnzint and Mohamadien (2016) pointed out delays, additional work, and variation in contractual works, change in physical conditions, disasters and errors in contract clauses as sources of conflicts in building projects. Odeh and Battaineth (2002) reported that interference, inadequate contractor experience, financing and payment, labor productivity, slow decision making were the five most important causes of dispute and delay in construction project with traditional contract. Kululanga*etal*. (2001) identified four sources of conflicts and dispute in construction, errors, defects and omissions in the contract documents, underestimating the real cost of the project in the beginning, and changed conditions and stakeholders involved in the project. .

According to Ayudhya (2011), basically, in developing countries, where budget allocation is limited to public works, public works departments face several constraints, such as financial, skilled engineers and labors, and materials, particularly for large infrastructure projects. Large scale projects usually involve very complex phasing planning and designing, financing and legal aspects. Overlapping and

interrelation between the parties involved usually occurred. Thus, this resulted in an increasing number of conflicts and disputes and related costs between the main contractor and the project owner.

It is commonly accepted that conflicts and construction projects claims need to be avoided. According to Yates (2000), conflicts and disputes tend to affect construction industry both in terms of direct costs (lawyers, claims consultants, management time, delays to project completions) and indirect costs (degeneration of working relationships, consequences of mistrust between participants and lack of team work). Latham (1994) acknowledges this problem and comments that the best solution is to avoid conflicts.

1.2 Statement of the problem

Generally, in many counties across the world and Tanzania in particular, construction industryhas beensurrounded with bad publicity of cost overruns, uncontrolled and unrealistic schedules, accidents and worse still abandoned and unfinished private and public construction projects which later on requires huge amount of money and time to revive (Takim, 2009). Studies carried out by Hartkoon (1997) revealed that most building projects tend to be completed out of scheduled time, budget and desired quality. One of the causes of such problems as identified by anumber of researchers inside and outside of the country is conflicts among project participants.

Among project participants, previous studies have unveiled that clients and contractors have been subjected to frequently eruption of conflicts among themselves more than other pairs of participants (Hartkoon, 1997; Ntiyakunze, 2011), to mention but a few. In relation to this, conflict can often occur through the simple fact that the

client is the only ‘non-expert’ in the team, but who is ultimately the person making the decisions. Not only that but also, much conflict occurs through a clients wish to alter the scope of works (whether in design, material, costs or time); this examples does not however precludethe fact that contractors are as liable and as likely to create conflict also(Steen, 1994).

It has been argued that in manycountries particularly developing countries, the governmentis the largest construction client (Mohemad *et al*, 2010). In this case, greatconcern has been expressed in recent years regarding theadverse impacts of variations in public building projects inTanzania. Arguably, this is because such projects areimplemented using meager public resources of which to thegreat extent come from tax payers’ money. Under normalcircumstances one would expect the project to be completed within the initially anticipated cost, time and quality, butreality takes the opposite direction. Many cases of poorquality, late completion and cost overruns are being reportedin many construction projects in Tanzania and some of theseprojects have not been successfully implemented as expected (Mlinga, 2008).

As a result of this, there is a need to examine and come up with best strategies to prevent the risk of conflicts between public clients and contractors from occurring in the first place and also to help avoid the unnecessary escalation of disagreements into contested disputes. This would prepare the ground for identifying and further developing appropriate strategies to prevent conflicts between public clients and contractors from occurring and this will allow projects to continue with minimum delay and disruption.

1.3 Main objective of the study

In the light of background to the study and statement of the problem, the primary focus of this study was to examine causes of conflicts that occur between public clients and contractors and develop the most appropriate strategies of reducing and eradicating occurrences of conflicts between public clients and contractors in Tanzania.

1.4 Specific objectives of the Study

To achieve broad research objective the following were specific objectives of the study.

i. To identify factors that lead to conflicts between public clients and contractors in building projects in Tanzania.
ii. To determine strategies used to resolve conflicts between public clients andcontractors inbuilding projects in Tanzania.
iii. To recommend how conflicts issues between public clientsand contractors inbuilding projects can be prevented and reduced in Tanzania.

1.5 Research Questions

In the light of the above objectives, this study sought to answer the following questions:

i. What factors influence occurrences of conflicts between publicclients and contractors in building projects in Tanzania?
ii. What strategies are used to resolve conflicts between publicclients and contractors in building projects in Tanzania?

iii. What measures can be taken by public clients and contractors in order to prevent and reduce conflicts issues betweenpublic clientsand contractors in building projects in Tanzania?

1.6 Significance of Study

The undertaking of study was expected to be very useful as it will unveil vital information about management of conflicts in building projects in Tanzania. Consequently, construction stakeholders including clients/ financiers, project managers, architects, engineers, quantity surveyors, contractors and other stakeholders in construction industry will be aware of types and causes of conflicts that occur between public clients and contractors during construction of building in Tanzania and what management strategies can be employed to prevent and reduced them. This in turn will help construction stakeholders to identify the suitable ways of managing conflicts issues between public clients and contractors and enabling the industry to produce desirable outcome.

1.7 Scope and Limitations of Study

Since the study of conflicts management covers wide area, it is important to understand from the beginning that this study was limited to examining conflicts issues that occur between public clients and contractors in Tanzania. The study explored the existence of conflicts particularly in construction phase and data was collected from public clients and contractors in Tanzania.

1.8 Methodology

This study employed survey and case study research approaches. Information was collected from both primary and secondary sources from construction

stakeholdersand it also covered three case studies of building projects mainly collected by using questionnaires and interview. Detailed description of methodology is covered in chapter three of this study.

1.9 Ethical Considerations

In the course of writing this dissertation the research paid maximum attention on research ethics by applying codes and ethical standards so as to handle professionalism. During research process, respondents were told vividly about the aim of this study with the aid of an introduction letter from Ardhi University so as make them aware on the purpose of this study. Participation in this study was voluntary whereby respondents were asked for their consent to be respondents. Moreover, the researcher maintained confidentiality during and after the process of data collection and collected data were used for academic purpose and not otherwise.

1.10 Research Report Layout

This study is organized as follows. Chapter one introduces the study by giving out the background of the study, statement of the problem, objectives of the study, research questions, scope and limitations of study, methodology, conceptual framework and the chapter summary. Chapter two contains the literature review. Chapter three presents the methodology which presents the research design, sample technique, sample size and data collection instruments. Chapter four is concerned with presentation, analysis and discussion of collected data. Finally, the summary and conclusion are presented in Chapter five. References and appendices are attached in the last part of the research report.

1.11 Conceptual Framework

According to Miles and Hurbeman (1994), conceptual framework is graphically or narrative clarifications of the main things to be studied, the key factors, variable and presumed relationships among them. Conceptual framework contributes to the formulation of the research design and hence provides reference points for discussion of research design and analysis of data. It is a summary of the whole idea about the research problem and its undertaking (Kombo and Tromp, 2006)

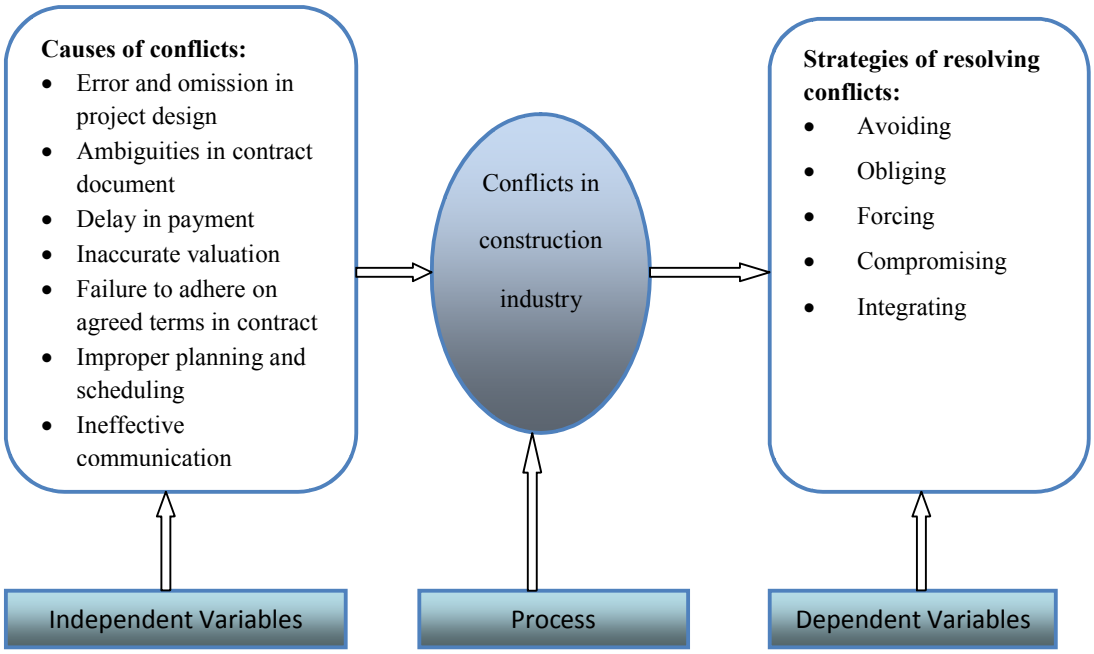
Based on the theoretical framework and empirical studies from different authors, there are different factors which influence occurrences of conflicts among stakeholders of construction which varies from area to area depending on the knowledge, experience and nature of the stakeholders in the construction projects.

Thus, this study identified error and omission in project design, ambiguities in contract document, late issue of payment, inaccurate valuation, failure to adhere on agreed terms in contract, improper planning and scheduling and ineffective communication were identified as factors that triggers occurrence of conflicts between public clients and contractors the context of construction industry in Tanzania. These factors were categorized as independent variables. On the other hand, strategies adopted in resolving conflicts which are avoiding, obliging, forcing, compromising and integrating were categorized as dependent variables.

According to Miles and Hurbeman (1994), a conceptual framework increase strengthens and keeps the research on the track by providing clear links from the literature to the research goals and questions. Hence, the relationship between independent and dependent variables as illustrated in Figure 1.1 laid a foundation of

carrying out this study by examining causes of conflicts and how it influences choice of strategies of resolving those conflicts.

Figure 1.1 Conceptual Framework



Source: Researcher's construction (2017)

1.12 Chapter summary

This chapter gives out a detail introduction to the study, background of the study and statement of the problem. It further explained objectives and questions that guided this study, significance of the study, scope and limitations of the study, brief research methodology, ethical consideration, description of the layout of the report as well as conceptual framework of the study. Next chapter provide literature review under which key issues related to research topic by referring to previous researches, books and journals are reviewed.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

A literature review is an account of what has been published on a topic by different scholars and researchers and is the foundation stage in conducting a research project. This chapter reviewed literature that had been developed by authors and researchers in the themes outlined in the study objectives, presents the existing status of knowledge on the topic and experience of other researchers about the same or related subject on conflicts in construction industry (causes, types, effects and strategies of resolving).

2.1 The Construction Industry

Construction industry has widely been regarded as one of the pivotal mechanism of enhancing development and achievement of aims of different countries. This is due to the fact that, any piece of infrastructure or real estate erected around us is undertaken by segments under Construction Industry.

When compared to other industries, the construction industry has been regarded as unique Ballard and Howell (1998). Ballard and Howell considered the uniqueness of construction projects by using an attribution of two characteristics. Firstly, the projects (the product) belong to the category of fixed position manufacturing. Construction possesses the characteristics of site-based production, which means that assembly must be performed on site. Secondly, the product is rooted in one place. This brings with it uncertainty and differentiation. For example, soil conditions can

vary widely from place to place and are often difficult to determine precisely prior to actual production. Also, the people and organizations brought to a construction project will typically exist in that configuration only for the project‘s duration (i.e. temporary teams). So accordingly, the construction industry possesses the characteristics of site-based production, has a product that is rooted in one place, and is produced by temporary teams.

These characteristics make construction a unique product, unlike other service and manufacturing sectors such as the car and electronic manufacturing industry, where there are opportunities to prototype products and build long-term working relationships (i.e. develop trust). The manufacturers in these types of industry can build cumulative experiences as well as long working relationships with their workers. In addition, the people involved in this type of work can forge a clear understanding of what should be done about the final product as they work with the systematic process of the manufacturing sector in which they are involved. On the other hand, each construction project, especially when it becomes more complex, reflects different or sometimes unique construction processes when compared with other projects (Emmitt and Gorse, 2003).

There are various parties that participate in the construction project. The parties involved in the project are called project stakeholders. Project stakeholders can be defined as the individuals or groups who are involved actively in the project which their preferences are affected both positively and negatively and result to project completion success. Normally, the main parties that are involved in construction projects include the project developers, contractors and consultants. The interactions

and interrelationships between these parties greatly affect the whole construction project performance, and have significant responsibility to ensure the project success (Takim, 2009).

In accomplishment of construction projects it is difficult for project stakeholders to develop a mutual understanding about the project (product) before embarking on it and it is at these interfaces that misunderstandings probably occur. Additionally, its difficult for the parties and the teams involved in project activities to develop longtermworking relationships which means that there is a great potential formisunderstanding and less opportunity for trust (Ballard and Howell, 1998).

In these circumstances, it can be hard to identify misunderstandings before they escalate into conflicts and, potentially, into dispute**.** The nature and complexity of construction can amplify the potential for conflict. To some extent, defining the responsibilities of each party or team clearly at the outset of the project could avoid misunderstandings about the scope of interest and goals (Emmitt and Gorse, 2003). Emmitt and Gorse (2003) indicate that the ability of the construction industry to avoid conflict is further hampered by the multidisciplinary nature of project teams. That is to say, that as the complexity ofconstruction projects requires it to call upon a great variety of expertise the knowledgeof several professions is needed to address different aspects of the project. Each teammember‘s underlying attitudes, values and goals will lead him/her to look at the project from a different perspective. Any attempt to impose one‘s own perspective on otherparties or teams may lead to tension and conflict. Thus, different views can cause conflicts of interest.

2.2 The Concept of Conflict

Conflict is a natural phenomenon in all organizations. It is part of leading, following, doing and thinking in all organizations. Deutsch and Coleman (2000) believe that conflicts occur between people in all kinds of human relationships and in all social setting because of the wide range of potential differences and diversities among them.

However, conflict is so pervasive that it has become difficult to define. There is a great variation on how conflict is defined. Tjosvold (1991) argues that, there is a great deal of conflict among social scientists about how conflict can best be defined. Contemporary literatures offer various definitions of conflicts.

Conflict refers to perceived or experienced incompatible differences within the individual or between two or more individuals, which may lead to some or other forms of opposition (Kroon, 1991).Gilman (2002) on the other hand, states that conflict is the natural tension that arises from differences. Conflicts, to some differing degrees, occur daily in everyone's life. However, conflict is not necessarily good or bad; but it is the way of handling that makes the outcome positive or negative. If handled ineffectively, conflict can quickly escalate to physical and emotional violence (Jones, 1994). According to Tjosvold (1991), conflict is essential to managing an organization. Conflict management is essential for successful innovation. Also, conflict, when poorly managed, it costs organization and individuals. Instead of accepting conflict and using it to identify and solve problems, failure to manage it becomes an additional burden (Tjosvold, 1991).

2.3 Views on Conflict

There are various perceptions regarding conflicts. Conflict is a reality in everyone's life and should be considered a natural process that occurs daily. As a group performs its assigned tasks, conflict inevitably arises (Robins, et al, 2003). Over the years three distinct views about conflict have evolved in organizations and workplaces.

2.3.1 The traditional view (the late nineteenth century until the mid-1940s)

This school sees conflict as bad, always as a negative impact, and lead to declines in performance as the level of conflict increases. In this view, conflict is closely associated with such terms as violence, destruction and irrationality (Verma, 1998). This traditional view of conflict is still widely held because industrial and business institutions that have a strong influence in our society concur with it. This negative view of conflict played a role in the development of labor unions. Violent or disruptive confrontations between workers and management led people to conclude that conflict was always harmful and should therefore be avoided (Verma, 1998). According to this view, all conflicts should be avoided. Thus, there is need to pay attention to causes of conflict and correct them in order to improve group and organization performance (Robins, 2005). Most conflicts have negative connotations, invoke negative feelings and often lead to destruction. Whether the effect of conflict is good or bad depends on the strategies used to deal with it (Robbins, et al, 2003).

2.3.2 The behavioral or contemporary view (late 1940s up to the 1970s)

This school argues that conflict is natural and inevitable in workplaces and that it may have either a positive or a negative effect depending on how the conflict is

handled (Verma, 1998). It believes that conflict may benefit a group's performance (Robbins, 2005). Dispute happens from time to time and it is not wise to put too much effort into avoiding or preventing the conflict. Concentrating only on large or critical conflicts allows people to resolve the conflict in a better and more effective way (Leung, 2010). According to this view, conflict is seen as a natural and inevitable outcome of people working together in groups and teams. Thus it needs not necessarily be viewed negatively, but rather positively as a potential force in contributing to the performance of individuals (Robbins, et al, 2003).

2.3.3 The Interactionist View

According to this view, conflict is not only a positive force, but is also necessary for an individual to perform effectively. Resolving conflicts means challenging normal processes and procedures in an effort to improve individual productivity or introduce innovative systems (Robbins, et al, 2003). Conflict is necessary to perform effectively, but not all conflicts are good. This school of thought has identified several types of conflict: Task conflict, relates to the content and goals of the work; relationship conflict, which focuses on interpersonal relationships; and process conflict, which relates to how the work gets done (Robbins, 2005).

The interactionists interpret conflict in a totally different way from traditionalists and people with a contemporary view. According to interactionists, conflict can be identified as either dysfunctional or functional. Conflict is a part of people's lives and a natural phenomenon in all organizations. A low level of conflict will not be harmful for daily operations but will help to create smooth functioning by better understanding of existing issues. Conflict at the desired level can inspire creativity

when handling issues and resolving conflict. Thus, conflict can be positive in work environments, but whenever a critical or major conflict occurs, it should be resolved as the undesired level of conflict can be harmful and dysfunctional for the organization (Leung, 2010).

Table2.1: Comparison of Conflict views

Views	**Traditional View**	**Contemporary View**	**Interactionist view**
Main Points	Caused by troublemakers, bad, should be avoided, should be suppressed	Inevitable between humans, not always bad, natural result of change, can be managed	Result from commitment to goals, often beneficial, should be stimulated, should aim to foster creativity
Effect on performance	Performance declines as the level of conflict increases	Performance mainly depends on how effectively the conflict is handled. Generally performance increases to a certain level as conflict level increases, then declines if conflict is allowed to increase further or is left unresolved	Certain level of conflict is necessary to increase performance. Performance increases with conflict up to a certain level, then declines if conflict increases further or remains unresolved

Source: Adopted and modified from Verma (1998)

2.4 Dysfunctional conflicts versus functional conflicts

Conflict can be either functional or dysfunctional depending on how it is managed. Ivancevich and Matterson (1996) described functional conflict as when the results of the conflict or confrontation between groups enhance and benefit the organizations' performance. Functional conflicts can play positive role in projects environment as it stimulate creativity and innovation (Loosemore, 2000). According to Vaaland and Häkansson (2003), in industrial network approach and conflict theories, most of scholars viewed imbalances and problems as the main stimulator of development and creativity. In the same line, Vaaland (2004) argued that without conflicts, progress and creativity disappear. Historically, for the past many years, conflicts has viewed as the two world wars which led to development of radar, jet-propelled aircraft, the United Nations, the World Bank, the international Monetary Fund, to mention but a few. The cold war conflict resulted in the development of nuclear power and space race which provided communication satellites and cell phones widely used today (Loosemore, 2000).

On the other hand, when disagreement prevents the organizational objectives from being achieved it is dysfunctional. Dysfunctional conflict is destructive in nature and gradually worsens interpersonal relationships, decrease productivity and leads to negative organizational results (Swart, 2001). With regard to dysfunctional conflict, Vaaland and Håkansson (2003) viewed it as a disease in organisations with primarily disruptive, dissociating, and dysfunctional consequences. In this perspective, the study of conflict has aimed to resolve it and to minimize its deleterious effects because of fear that too little coherence can develop into destructive conflict and a

diffusion of focus. In projects this is achieved through detailed contracts and a high degree of specification. Furthermore, price mechanisms and institutionalized patterns of behavior are used as instruments to reduce emergence and growth of conflict.

In addition, the destructive nature of dysfunctional conflicts and constructive nature of functional conflicts were reported by the study of Carnevale and Probst (1998), in which no conflict was induced, showed that participants in a situation in which they were able to anticipate a co-operative negotiation (functional conflict) with another individual were more flexible in their thinking and more creative in their problem solutions. However, cognitive flexibility and creative thinking decreased significantly when participants anticipated a competitive, hostile negotiation (dysfunctional conflict).

2.5 Stages of conflict

In 1967, Pondy developed a process model of conflict which is very useful in understanding how conflict starts and what stages it goes through. Pondy identifies five stages in what he calls a "conflict episode", namely; latent conflict, perceived conflict, felt conflict, manifest conflict, and conflict aftermath. Pondy inVaaland and Häkansson,(2003) contend that, each conflict episode begins with conditions characterized by certain conflict potentials and can be thought of as a gradual escalation to a state of disorder with an open waror aggression as a climax of a conflict episode. However, that does not mean every conflict episode should pass through every stage to open aggression. Parties to the conflict may not perceive a potential conflict, or if perceived, the conflict may be resolved before hostilities break out (Vaaland and Häkansson, 2003).

2.5.1 Latent Conflict

Latent conflict can be understood as conflict potential. It provides a list of underlying conditions or sources of conflict. After a search of relevant literatures, Pondy (1967) in Vaaland and Häkansson (2003) has summarized three fundamental types of latent conflict: (1) competition for scarce resources, this happens when the aggregated demands of participants for resources exceed the resources available in the project or the organisation. (2) Drives for autonomy, this happens when one party either seeks to exercise control over some activity that another party regards as his own province or seeks to insulate himself from such control on which is deemed to exercise (3) divergence of subunit goals, this is a source of conflict when two parties who must cooperate on some joint activity are unable to reach a consensus on cooperation action. These three types of latent conflicts are formed in different situations. Competition forms the basis of conflict when demands of participants for resource exceed its availability. These types of latent conflict can be present simultaneously (Vaaland and Häkansson, 2003).

2.5.2 Perceived Conflict

In the dynamic processes of conflicts, the perceived conflict episode comes after the latent conflict episode stage. This is a cognitive state when at least one of the parties to a conflict begins to perceive or become aware of a conflictful situation but neither party is upset about it. This implies that latent conflict can exist when no participant perceive the conflicts. In the first situation, conflict is directly connected to the misunderstanding between different participants; while the second situation is related

to a value that is central to participants' personalities(in (Vaaland and Häkansson, 2003).

2.5.3 Felt Conflict

In the course of developing the idea of felt conflict, Pondy (1967) in Vaaland and Häkansson, (2003) firstly put forward the difference between felt conflict and perceiving conflict. Perceiving conflict occurs when one party or individual is aware of potential conflict, which is based on the differentiation of their goals and values. Feeling a conflict is internal to the individual's emotion, such as anger, anxiety, frustration, tension, etc. As Pondy (1967) in Vaaland and Häkansson, (2003) argued that, the awareness or perception of one party or individual on conflictual situation or serious disagreement with other (s) might not have effects on the party or individual's affection towards the other(s). The felt conflict is also known as emotional affections between actors when conflict occurs. According to Pondy (1967)in Vaaland and Häkansson (2003), felt conflict is under a personalized mechanism. The personalization of conflict can be explained in two ways. One is that an individual need to vent the anxieties resulted from organizational or extra-organizational pressure; another one is the whole personality of individual is involved in the relationship.

2.5.4 Manifest Conflict

Manifest conflict can be explained as a range of conflictful behaviours. Pondy (1967)in Vaaland and Häkansson (2003) described it as a behavior that in the mind of the actor, frustrates the goals of at least some of the other. According to Pondy, the most obvious conflictful behaviour is open aggression. Suchbehaviour can be

expressed in form of open aggression, sabotage, apathy, resistance to therules, etc. However, such violent behaviour is proscribed by organizational norm. But the motivation still remains. Normally such behaviour is manifested in forms of aggressive and defensive coalition or apathy. The behaviour must be interpreted in the context it takes. The disputants are supposed to be involved in the same relationship. And to be a conflictual behaviour, one participant should be engaged knowinglyto frustrate or block other's goals; and such behaviour must be perceived by both disputants as conflictful. As Pondy (1967)in Vaaland and Häkansson (2003) mentioned, many conflict resolution programs are applied in the interface between manifest conflict and either felt conflict or perceived conflict to prevent the conflict from entering a non- cooperative behaviour. The specific administrative devices to resolve the conflicts will not be discussed here since the research aims to provide an understanding on the development of conflict process.

2.5.5 Conflict Aftermath

In relation to conflict aftermath, Pondy (1967)in Vaaland and Häkansson, 2003 argues that Conflict episode is a repeatedly proceeding and cyclized process that constitutes the relationship between the participants. The combination of effects from latent conflict to manifest conflict determines the development of one conflict episode; if a cooperative environment cannot be achieved among different participants, a new episode will be triggered by the legacy of the last episode. Such conflict legacy is termed conflict aftermath.

On one hand if the conflict is genuinely resolved to thesatisfaction of all participants, the basis for a more cooperative relationship may be laid; orthe participants, in their

drive for a more ordered relationship may focus on latent conflictsnot previously perceived and dealt with. On the other hand if the conflict is merely suppressedbut not resolved, the latent conditions of conflict may be aggravated and explode in moreserious form until they are rectified or until the relationship dissolves (Vaaland and Häkansson, 2003).

2.6 Visibilities of conflicts in projects

The visibilities of conflicts have been described by scholars with regard on how they may be seen or not be able to be seen in projects. Loose more (2000), make distinction between overt and covert conflicts. Visible and invisible conflict terms will be used in this study to describe overt and covert conflicts. Basically whether to consider conflicts as visible or invisible in project to the large extent depend on the perception of informants. Visible conflicts can briefly be described as a conflict that is perceived by all parties involved in the projects. On the other hand, a conflict is invisible if none of actors are aware of its existence; it means that actors provide different opinions about that conflict. Invisible conflicts can be detected by a third party like a researcher. The classification of conflicts onto visible and invisible is difficult because sometime a conflict can be visible and on the other time it can invisible. In relation to this context, Omisore and Abiodun (2014) argue that sometimes it can be difficult to tell whether a fight or a love affair is going on. If a conflict is perceived by one actor involved it can be regarded as a partly conflict.

According to Verma (1995) most conflict is invisible and becomes visible with an incident. This statement indicates that the “seeds” of a conflict may exist years before we notice it. In the same line, Jex and Britt (2008), argues that actual conflict

may exist in invisible form years before there is a clear formulation of the topic. She stresses the danger of seeing the visible conflict as the conflicts itself, because the "true issue" may be much deeper than the topic on the surface. It is a mistake to limit the thinking about a conflict to visible conditions. Jex and Britt (2008), argues that we must focus on invisible conflicts that go on from one day to another in various degree of intensity. If we do not concentrate on identifying invisible hidden conflicts, they may burst into serious visible conflicts that have a major impact on the relationship. Visible conflicts may be easier to that invisible conflict. When analyzing invisible conflict, it is important to understand whether the conflict is simply a triggering of an old, unmanaged conflict or if it is really something new (Rahim, 2011).

Jex and Britt (2008)applies the concept of displaced conflicts concerning situations where experienced conflicts are visible, while that which is not directly expressed is the invisible conflict. The visible conflict may reflect the invisible conflict in a symbolic manner. An indirect form is usually considered as "safer", when the conflict actually involves issues that seen dangerous to deal with in a more direct manner. A visible conflict may also simply reflect a general irritation or tension within a project relationship. This irritation results from a hidden conflict.

Both visible and invisible conflicts need equal concentration in order to understand the full meaning of conflicts. A great deal of existing research with interorganizational conflict is focused on visible conflict. Visible conflicts are easier to detect than invisible, but invisible conflicts may still be more important. Since

there can be a connection between visible and invisible conflicts it is essential to consider both (Jex and Britt (2008).

2.7Sources versus Causes of Conflict

Omisore and Abiodun (2014) argued that it is important to differentiate between sources and causes of conflict in organizations. According to Omisoreand Abiodun (2014) sources of conflicts explain the place or nature with which or from which conflict emanates; (it explains the reason why conflict is endemic and inevitable) while causes of conflicts explains these conditions that may warrant conflict to spring up and become an issue of concern. This is because conflict at its source may not necessarily become an issue of controversy, confrontation and concern of all but conflict which is caused (either intentionally or not) will no doubt bring about controversies and confrontations which may not necessarily surface in conflict at its source.

2.7.1 Sources of Conflict

Fajana (2000), identifies two sources of conflicts, these are:

(i) Internal sources: This is so called because they refer to factors which are inherent within the framework of an organization. Fajana (2000), states that the major prime factor of internal sources of conflict is the "Opposing interests" of project actors. These "divergent interests" will bring about conflict in attempts by the two parties in organizations to try to share what Ajibade (2004) in Omisore and Abiodun (2014) calls "industrial cake". Apart from the above, it is another statement of fact that there is usually "power relationship" between the two actors in an industry which no doubt produce conflict and make such inevitable.

(ii) The external Sources: These are so called because they are outside the four walls of an organization. It may occur when the third party intervention to industrial dispute becomes one sided or biased. A good example is where government as the third and regulatory party tries to formulate policy or enact laws that favour one party at the detriment of the other. Such may generate conflict.

2.7.2 Causes of conflicts in construction projects

By considering all the types of interaction in which divergent ideas and disagreements might emerge in the construction project context, Filley (1975) in Rahim (2011) put forward nine conditions that specifically predispose organisations towards conflict, as follows:

1. Ambiguous roles, work boundaries, responsibility and authority
2. Inconsistency and/or goal incompatibility
3. Communication break down
4. Interdependence in tasks or activities
5. Differentiation or specialization in organizations
6. Need for joint decision-making
7. Need for consensus
8. Behaviour regulation
9. Unresolved prior conflicts

With regard to these antecedents or latent conditions, Verma (1995) argued that theyare a way of understanding conditions or situations leading to conflict, the potentialresults of conflict and the various methods of dealing with conflict in an

organisation orproject environment. Hence, eachof one these nine latent conditions is now considered in the following sub-sections.

2.7.2.1 Ambiguous roles, work boundaries, responsibility and authority

In carrying out projects, some overlapping of workerroles, and hence some ambiguity in terms of responsibilities, occurs, whether this be atthe level of individual workers, units, departments or divisions. This condition ignites conflicts in several ways. In the research this type ofroleproblem has been identified as role conflict, and role ambiguity.Firstly, role conflict is what happens when a role generates incompatible expectations. Secondly, role ambiguity means there is a ―lack of clarity about the performance of a role. This arises when unclear boundaries and descriptionscloud the authority structure, objectives, and assignment of responsibility.The problem of role conflict and ambiguity has been documented in studies whichcorrelate with other dysfunctional outcomes such as performance, commitment anddissatisfaction that are related to the job and work group relationship (Verma, 1995).

2.7.2.2 Inconsistency and/or goal incompatibility

Inconsistency or incompatible goals are one among leading issues identified as sourcesof conflict in several works in the literature. In intergroupand inter-organisational settings, incompatibility exists when the goals of twoparties are in direct opposition, meaning that one group may only accomplish its goalsat the direct expense of the other group‘s aspirations (Jex and Britt, 2008). Inconsistency and/or goal incompatibility can be observed forinstancesbetween organisations dealingwith marketing whose main goal is to satisfy customers by giving them the

requiredproduct as and when they want it, whereas, those involved in manufacturing areattempting to produce the product as efficiently as possible and achieve economies ofscale. This incompatibility or inconsistency can act as a provoker of genuine conflict.In a construction project also, goal incompatibility can appear between individualsor parties involved in the same mission and having similar purposes within a project inseveral aspects. For example, when considering costs, the project manager may perhapsbe much more concerned with the quality control of building materials while the maincontractor may be more interested in completing the task on or before the predetermineddeadline, and may also be prepared to accept the standard of construction materials aslong as they meet the client‘s requirements (Jex and Britt, 2008).

2.7.2.3 Communication breaks down

Problems and difficulties in communication can be semantic difficulties, misunderstandings and noise in communication, these factors may affect effective communication. As a result, problems arising out ofcollaboration can stimulate misunderstanding and potential antecedents leading toconflict (Furnham, 1997). In construction industry especially in the process of constructing large projects it requires a high level of communication amongall the professionals working together as well as with trades’people during the whole lifeof the project. And as Verma (1996) has observed that the most prominent cause ofmisunderstandings and intense conflicts in most projects, is poor communication, it canbe appreciated how important effective communication is for project success.

2.7.2.4 Interdependence in tasks or activities

According to Jex and Britt (2008), Interdependence in tasks or activities is one of the potential sources of intergroup conflict as it impacts on the interactionbetween people working together. The situation occurs when the activity(s)or performance of one group affects the subsequent performance of the other group. Incomplex construction projects or organisations, the key teams or groups are expected to put together thedifferent tasks which present the different sub-systems in which they are involved. This is due to the reason that in order to achieve their goals, the groups must be homogeneousso thatthey can work with each other in pursuit of the overall organisational goal (Rahim,2011). Basically, this requires them to work as single unit, relying on one another forthe duration of the specified activity.Reciprocal interdependence exists between groups when they are involved in an activitywhere there is a series of continuous mutual exchanges (inputs and outputs) amongthem. For instances, this form of interdependence is evident during the preparation of the shopdrawing for any construction project. This drawing or set of drawings is produced byseveral project personnel such as the contractor, supplier, manufacturer, sub-contractorand others. It contains pre-fabricated components (e.g. elevators, structural steel,trusses, windows, appliances, etc.), and explains the fabrication and/or installation ofthe items to the manufacturer‘s production or contractor‘s installation crews. However,any error or improper mutual exchange action committed by one of these personnel,especially during the construction phase, would probably result in a negative impact onthe other(s) which would raise the potential for conflict.

2.7.2.5 Differentiation or specialisation in an organisation

Differentiation (specialisation) can be described as the differences in cognitive and emotionalorientation among the managers in different functional departments. Establishment of a conditionleading to conflict can take place when people in organisations or project teams have different functional specialisations and become involved in the same project or activity.For instance, a modern and highly-technological organisation is characterized by large numberof specialists responsible for unique tasks. These specialised groups process their own and uniqueperspective, language, and goals. Hellriegel and Slocum (2006) arguethat the greater the number of ways in which groups see themselves as different fromeach other, the greater the potential for conflict between them. This is because Functional specialization requires people with specific knowledge background, experience and skills.

2.7.2.6 Need for joint decision-making

In construction especially complex projects there are at least two reasons which make joint decision-making crucial. Firstly, interdependenceand links between the project‘s activities means that these interdependent activities cannot be performed or completed unless by interference from other activitiesperformed by other actors as greaterinterdependency means greater urgency when it comes to joint decision making.The second reason is that mutual perceptions are required to make the appropriatedecisions regarding such interdependent activities. The conditions of conflict areperhaps prevalent when unclear perceptions of a decision take place at differenthierarchical levels or within different project groups (e.g. technical vs. management)working together to make a joint decision. In relation to this, Vaaland

and Håkansson (2003) provided an example of the problem of violatingmatching hierarchies. It happens when an expert group at alower hierarchical level on the supplier side becomes dissatisfied with a higherhierarchical level project manager on the buying side, or when problems or solutions areaddressed directly to the project core team manager, bypassing the adjacent supplierproject manager and going directly to top management in a large supplier organization.

2.7.2.7 Need for consensus

This condition is very similar to the need for joint decision-making explained above. This condition of potentialconflict arises when groups of divergent talents, background, norms and goals mustreach consensus or agree on a course of action among them. In this situation,disagreements would be expected to occur and would probably be difficult to manage. However, the likelihood of creating conflict through any course ofaction would be less when group members are working together, and being moreflexible and agreeable when making joint decisions. Forcing opinions from members ofa group is another aspect that may create the conditions necessary for conflict whichhappens when, for example, a member of a powerful decision-making group attempts toforce his or her opinions on others(Verma, 1995).

2.7.2.8 Behavior regulation

This occurs when an organisation‘s rules, procedures and regulations can preserve natural parts of theproject environment and restrict team members’ actions, making them accountable tothe same rules. This plays part in preventing any perceived sense of favoritism. But, team players may feel they are in opposition to (or in _conflict ‘with) every organisation theyserve, especially if the management tries to impose or

enforce its ideas. Such situations may involve safety and security concerns and would lead tofrustration and conflict. An example of this is the fact that most employers have rulesprohibiting harassment, which deter conflict (Kezsbon et al, 1999).

2.7.2.9 Unresolved prior conflicts

Schermerhorn (2010) argues that at the time conflicts go unresolved; they remain in latent state and often re-emerge in the future as the basis for conflicts over the same or relatedmatters. This is a characteristic of conflict that ittends not to dissipate but provoke and increase a tense atmosphere in such a way that itbecomes even more destructive. Lorenz (1999) said it can have a tremendouslynegative impact on the parties themselves and destruct relationshipcompletely.Sometimes one party is unwilling to commit to getting a conflict resolved. On this note,Verma (1995) states that such people can generate even more difficulties until perhaps asituation is reached whereby it is impossible for the team to work together in anorganisation or project. As a result, any failure or lack of success in dealing with andmanaging a conflict properly would perhaps lead to more serious problems in the future.

2.8Summary of causes of conflicts; findings from literature

Apart from Filley (1975), the subject of causes of conflicts has attracted the attention of many authors who came up with different perceptions in different contentions regarding causes of conflicts and making the subject attractive over time. However, based on broad literature review on causes of conflicts, Ntiyakunze (2011) summarizes it as it can be seen in Table 2.3 below. The causes were classified in four groups; the common root causes category, this include primary causes that are

commonlyexpected to cause conflicts in building projects. The second category is of causes generated by themselves; these are causes that arise from the environment or state of affairs created bymembers in the project team, for instance if there is poor communication or personalityclashes among members in a project team that may cause conflicts at some stage of projectlife. The third category is of common proximate causes; these are considered as closest orimmediate factors responsible for causing conflicts in building projects. For example, incomplete tender documents which do not prescribe the extent of work to be done will causeconflicts at the time of payment due to lack of quantities that could provide the base forpayment. Lack of quantities in the tender document is the proximate cause of conflict in suchcases.The forth category of causes of conflicts is claims; claims are demands made for a right orrequirement. If the demand is not honoured, it will aggrieve the person making such demandand hence cause conflict with the other person who is turning down the demand. For that reason,un-honoured claims such as financial claims for additional works, claims for extension oftime etc. may cause conflicts in building projects.

Table 2.2: Summary of causes of conflicts in building projects established from literaturereview

Common root causes	Causes generated by themselves	Common proximate cause	Claims
Unrealistic time / cost /quality targets (by the client)	Clients' lack of information or decisiveness	Internal conflicts (eg. In joint ventures)	Variations
Unrealistic tender pricing	Unrealistic information expectations (contractor)	Inadequate contract administration	Unforeseen ground conditions
Inappropriate contract type	Inadequate brief	Inadequate contract documents	Ambiguities in contract documents
Adversarial (industry) culture	Poor communication	Inaccurate design information	Interference with utility lines
Uncontrollable external events	Personality clashes	Incomplete tender information	Exceptionally inclement weather
Unclear risk allocation	Lack of professionalism of project participants	Inadequate design documentation	Delayed site possession
Unfair risk allocation	Lack of competence of project participants	Inappropriate contractor selection	Delayed design information
	Vested interest	Inappropriate payment modalities	Acceleration of work
	Changes by the client	Inappropriate contract form	Suspension of work
	Slow claim response		Other disruptions (by employer or others)
	Exaggerated claims		Interest on claims
	Estimating errors		Substantial increase in quantities
	Others, work errors		Price fluctuations (escalations)

Source: Ntiyakunze (2011)

2.9 Strategies of resolving conflicts

Schermerhorn (2010) argues that at the time conflicts go unresolved; they remain in latent state and often re-emerge in the future as the basis for conflicts over the same or related matters. Similarly, Verma (1995) argues that any failure or lack of success in dealing with and managing a conflict properly would perhaps lead to more serious problems in the future. Therefore, it is important to understand (and apply) various conflict resolution techniques. Blake and Mouton cited inCheung and Chuah (1999) identified five classical main modes or methods of resolving orhandling conflicts as integration, obliging, compromising, avoiding and dominating.

2.9.1 Integration (Collaboration)

Integrating (high concern for self and others) styles are associated with problem solving which may be a creative solution to problem solving. As Rahim (1992) states, it involves collaboration between, for example, project partiesin several ways i.e. exchanging information, openness, and examining differences tobring about an acceptable solution which is agreed by both parties. In several studiesthis style has been divided into two elements: confrontation, and problem solving.

Confrontation involves direct and open communication and has been described as encouraging creative solutions for problem-solving. In fact, it is said to generatealternatives and solutions to specific problems at hand. This strategy of managing conflicts can effectively be applied when can be used: when conflicting parties can bothget at least what they wanted and even more, when a common power base can be created,when cost for resolution of conflict in hand should be reduced,

when skills arecomplementary, when a conflict fundamentally involves attacking a common foe, when thereis trust between conflicting parties, when there is enough time for resolving the conflict, whenthere is confidence in the person's ability and when the ultimate objective is to learn. Thisapproach exemplifies a creative active response to conflict (Kerzner, 2003).

2.9.2 Obliging (or accommodating, suppression)

Obliging (low concern for self and high concern for others) style is associated with attempting to play down the differences and emphasizing commonalities to satisfy the other party. An obliging person neglects his or her own concern to satisfy the concern of the other party (Rahim et al., 2002). Obliging (accommodation) takes place when one party is prepared to concede an issueif it appears to be more important to the other party.

This style can effectively be applied when there is an overarching goal need to be reached, there is a need to create an obligation for a trade-off at a later date, there are low stakes involved inthe conflict, liability is limited, to maintain harmony among the conflicting parties, anysolution is adequate, creation of good will among conflicting parties is important, there is ahigh possibility of losing the claim at stake in the conflict and when there is need to gain moretime. Indeed this approach has some features of a passive response to conflict because underthis approach some problems are left unresolved(Ntiyakunze, 2011).

2.9.3 Avoiding (or withdrawing, denial)

Avoiding (low concern for self and others) style has been associated with withdrawing, buck-passing, or sidestepping situation. An avoiding person fails to

satisfy his or her own concern and of the other party (Rahim et al., 2002). Under this style, it is assumed that if the situation is ignored, the conflict may resolve itself without requiring any personal involvement (Jonkman, 2006). This attempt to maintain neutrality often annoys both parties, but it can be useful technique for "cooling off" parties to avoid engaging in unimportant matters.

However, avoidance is not a successful method for achieving a long term solution since the original cause of the conflict remains (Truter, 2003). It represents a short termstrategy for handling conflict which neither deals directly with the conflict at hand norbuilds any cohesion within a team (Kezsbom et al, 1989), and as an approach it isperhaps the least likely to overcome any conflicting issues or leads to project success.

2.9.4 Dominating (or competing, being uncooperative, assertive, power)

Dominating (high concern for self and low concern for others) style has been identified with win-lose orientation or forcing behavior to win one's position. A dominating or competing person goes all out to win his or her objective and, as a result, often he/ she ignore the needs and expectations of the other party (Rahim, 2002). The dominating style involves the use of power and aggressive behavior in attaining self- concerns. Such behavior shows a lack of respect for the rights and feelings of others (Jonkman, 2006).

In fact, this approach may be appropriate when certain conflict issues are trivial or when quick, decisive action is needed. Additionally, it can be appropriate when unpopularactions have to be confronted. This style is relevant for personnel or high levelmanagement who formulate strategies and policies (Rahim, 2002).

2.9.5 Compromising (or negotiating)

Compromising technique aims to solve the conflict by making each party give up some desired outcomes in order to get the mutually desired ones. Compromising, in most cases, involves bargaining by the conflicting parties and generally requires a situation that offers both parties the chance to be in better position or at least in no worse position after the conflict is resolved. Therefore, using this technique ensures that each person wins some major issues and loses others (Bartol & Martin, 1991).

Compared with the other styles, the compromising party makes more concessions thanthe dominating party but not less than an obliging party. In addition, such acompromising party will also address problem issues more directly than an avoidingparty but not more than an integrationist. Generally, this style produces sub-optimalresults, which results from splitting differences. It can be used when the goals aremutually exclusive to both parties, when both sides are equally powerful. Heavyreliance on this style may produce dysfunctional conflict and is probably notappropriate when there is a complex problem requiring a problem-solving initiative (Rahim, 2002).

2.10Theoretical Framework

Theoretical framework is the collection of interrelated ideas based on theories. It is composed of a theory or theories that the researcher will use to explain issues in the study (Kombo and Tromp 2006). This study was guided by Principal- Agent theory.

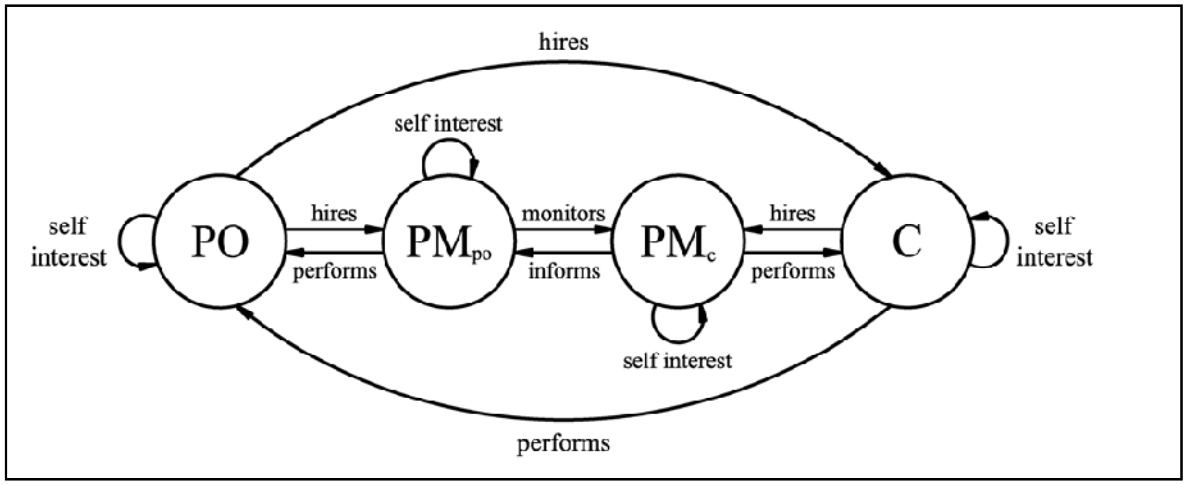
The Principal-Agent Theory

In construction projects, the project owner and contractor as principal and agent form the key relationship. Delegation of tasks establishes a principal-agent relationship

between the project owner and manager, where the principal (project owner) depends on the agent (contractor or project manager) to undertake a task on the principal's behalf (Müller and Turner, 2005).

As it is shown in Figure 2.1, the project owner acts as the principal in relation to both the projectowner's project manager and contractor as agents, and the contractor acts as the principal in relationto the contractor's project manager. Therefore, there are two principals and three agents involved,where the contractor is both a principal and agent in a project.

Figure 2.1: Principal-agent theory framework for construction project



Source: Müller and Turner (2005)

KEY:*(PO: Project owner, C:Contractor, PMpo: Project owner's project manager, PMc: Contractor's project manager)*

Information asymmetries apply whenever the principal and the agent are not in possession of the same information at the same time. In construction projects, we have four key parties as described in Figure 2.1 that work together, and it is assumed

that they will share important information in order to meet main project's targets: time, cost, and quality. However, because of self interest, they will not be willing to share all the information all of the time. Therefore, the following types of information asymmetries apply for acting parties: hidden characteristics, hidden information, and hidden intention. Respectively, these three types of information asymmetries generate following risks: adverse selection, moral hazard, and hold-up.

Based on the principal-agent theory, relationships between the project owner and contractor, as well as the two project managers employed by them, are systemized according to related asymmetric information and corresponding types of risk. Hidden characteristics are associated with adverse selection; hidden action and/or hidden information are associated with moral hazard; and hidden intentions are associated with hold-up (Jäger, 2008).

Hidden characteristics cause the adverse selection problem beforethe contract is signed between the parties involved. It means that the project owner does not have all the information about the contractor before the contractor is hired. Similarly, the project owner does not have all the information about the project manager before hiring. The same holds for the contractor and the project manager working on the contractor's behalf. Therefore, in the case of adverse selection we have three different parties involved and three information asymmetries. The adverse selection problem occurs in the early phases of the project (Schieg, 2008).

Hidden information or hidden action causes the moral hazard risk. This occurs *after* the contract is signed between involved parties. For instance, the client cannot be sure that firms, once hired, will fully mobilize their capabilities on the client's behalf

(Winch, 2010). In our case, four parties are potentially involved in the moral hazard problem. After the relevant contracts are signed and the project owner has hired the contractor and the project manager, and after the contractor has hired the project manager, they cannot be sure that all information will be shared in an appropriate way because of the self interest of all the parties involved. The moral hazard problem also occurs between two project managers because they have their self interest as well (Chang, 2007).

Hidden intentions can cause hold-up problems. The project owner can invest some money at any stage of the project and trust that the contractor will cooperate, but it can happen that the contractor will actually behave opportunistically. After the project owner realizes that the contractor is acting opportunistically, it can be too late for the project owner to withdraw investment. The same holds in the opposite direction. The contractor can also invest some money at any stage of the project and trust that the project owner will cooperate, but it can happen that the project owner will act opportunistically (Schieg, 2008).

2.11 Features of public and private clients

Public clients are concern with wide range of public construction works such as buildings and infrastructure projects while private clients are concern of either local or sole traders who need assistance with construction, alteration or maintenance of private properties. Public clients are involved mostly in projects which are financed by local or central government while private clients are highly concern with projects which are financed private. In procurement system Public clients use Public procurement regulatory Authority while private clients use other form of contracts.

2.12Chapter summary

This chapter mainly reviewed key concepts of conflicts and conflicts resolution approaches. It begun by describing the construction industry and put forward that the industry is unique as it possesses the characteristics of site-based production and its product is rooted in one place. This made the industry to be at risks of frequently conflicts. The chapter also reviewed the definitions of conflicts given by different authors. Summarizing those definitions given, this research defines a conflict as disagreement or incompatible differences perceived or experienced within the individual or between two or more individuals, which may lead to some or other forms of opposition. Also, three different views on conflict have been analysed which are the traditional view, behavioral or contemporary view and the interactionist view. The chapter establishes that depending on how conflict is managed it can be either functional or dysfunctional conflict. The chapter also discusses stages of conflicts as suggested byPondy (1967) which are latent conflict, perceived conflict, felt conflict, manifest conflict and conflict aftermath.The chapter further discussed main sources and causes of conflicts in construction industry and strategies of resolving it. Lastly, the chapter discusses the theory adopted to govern this study which is the Principal-Agent Theory.Basically, the chapter discussed various concepts of conflicts that have been used as a foundation for enquiry for the empirical investigation presented and case studies in chapter four.

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CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter presents important methodological procedures that were used in the process of data collection and analysis. The research methodology involves the systemic rules and procedures upon which this research topic is based. It particularly focuses on research approaches; research design; targeted population; sampling procedures and composition for data collection. The chapter also provides explanation of the methods that was used in collecting data.

3.1Research approaches

There are numerous approaches for doing research that each of these approaches suit different researches. Creswell (2003), classifies research approaches into three key approaches to research, these are; a quantitative, a qualitative and a mixed method approach. This study adopted mixed method approach whereby both quantitative and qualitative research approaches was used. Tashakorri and Treddie (1998) argued that mixed approach is normally appropriate in research studies, where due to the nature of the research being investigated, it is possible to collect both quantitative and qualitative data. In this regard, it was thought that by using mixed method approach the analysis of study will offer a better and deeper understanding about conflict issues that occurs among public clients and contractors during construction phase in Tanzania.

In this study, quantitative research approach was employed specifically in computation of various frequencies which related to respondent's information. When respondents' information are computed, it helps us to understand better the degree or magnitudes of respondents' agreement or disagreement and being able to interpret the studied behaviors (Sverlinger,2000). On the other hand, qualitative research approach was adopted with the intention of comprehending participants' perceptions towards critical conflict issues that occurs among public owners and contractors during construction phase. Qualitative approach provides room for the researcher to enter the respondent's personal/world in order to gain deeper and clear understanding of their attitudes, feelings, perceptions and experiences through interviews and observations (Cresswell, 2003). So, in this study quantitative approach was used in data collected in the form of closed-ended questions and qualitative approach was used in data which describes events and experiences without the use of numeric data.

3.2Research design

The purpose of this study is to examinecritical conflict issues among public owners and contractors during construction phase. The study employed both qualitative and quantitative research approaches with the qualitative one being dominant. Within qualitative inquiry, exploratory case study design was used in undertaking this study. Exploratory case study design is preferred over other designs with consideration that nearly all topics in qualitative inquiry can be investigated by case studies (Gall et al., 2007). Yin (2003) classifies case study design into three categories based on types of questions used in studying a particular phenomenon. Principally, when the study has *why* and *how* questions then the preferred design is explanatory case study and

experiments. Also, when the study has *who* and *where* questions then the preferred design is descriptive case study or histories and when the study has *what* question then the preferred design is exploratory case study design (Yin (2003).

Basing on Yin (2003) this study follow under exploratory case study strategy because the study will answer four main questions which are "what" questions, these questions are: "What factors influence occurrences of conflicts between public clients and contractors in building projects in Tanzania?" "What strategies are used to resolve conflicts between public clients and contractors in building projects in Tanzania?" and "What measures can be taken by public clients and contractors in order to prevent and reduce conflicts issues between public clients and contractors in building projects in Tanzania?"

3.3Targeted Population

The targeted population of this study was all Class One Building Companies that were registered by CRB which are found in Dar es Salaam City. The selection of this class of building contractors was made on the basis that they are well established firms with their offices quite easily to be located and are exposed to disagreements and conflicts with their clients by virtue of the type and size of projects they handle. Moreover the study targeted clients consisted of public individuals, e.g. Ministries, Government departments, Agencies and institutions including Schools and Hospitals located in Dar es Salaam Municipality etc. In order to have a specific number of targeted population, the researcher passed through the official website of CRB and sorting building contractors who are based in Dar es Salaam City and found 80 construction companies. Basing on this, the study targeted population was all

80Class One Building Companies which are based in Dar es Salaam City as well as their clients. The selection of Class One Building Companies was done with a consideration that these Companies have vast experiences of working with different clients including public clients hence ensuring provision of required regarding existence of conflicts between contractors and public clients.

3.4Sample size and sampling techniques

3.4.1 Sample size

The sample size was determined by using the Slovin's formula of sample size calculation which is given as

$n = N / (1 + N e^2)$.

Where

n=sample size,

N= total population,

e = error tolerance

Given:

Population (N) = 80

Error tolerance (e) = 0.0735 which is 93% confidence level.

$$n = \frac{80}{1 + 72 \text{ X } 0.0735^2}$$

$$n = \frac{72}{1 + 2.3229675}$$

$$n = \frac{80}{3.3229675}$$

$$n = 25$$

The study employed 25 sample sizes of contractors; it has been recommended by Natasha et al., (2005) to include 30 cases per group or 10-20% of the population in the study. The number used in this study is equally to 30% of targeted population which 80 which is a total number of all 80 Class One Building Companies which are based in Dar es Salaam City. The established number of contractors was also used in selection of 25 respondents who were their clients.

3.4.2 Sampling Techniques

3.4.2.1 Purposive sampling technique

Purposive sampling technique which is one of the probability sampling techniques was used in identifying and selecting the key respondents namely contractors. According to Walliman (2005), purposive sampling is a useful sampling method which allows a researcher to get information from a sample of the population that one thinks knows most about the subject matter.In this type of sampling, the choice of the sample items depends exclusively on the judgement of the investigator. Purposive sampling is a useful sampling method which allows researcher to get information from a sample of population that one think knows most about subject matter. Purposive sampling techniques include hand picking of the subject cases that the researcher thinks that possesses rich information to accomplish the researchers' objective.

In this research purposive sampling was used to pick the sample of 25Class one contractors. This is because the researcher required certain categories of respondents who had been involved in a lot of construction projects and therefore had encountered some amount of disagreements on construction sites with other

stakeholders particularly clients to answer the questions and provide required information.

3.4.2.2 Snowball sampling technique

Purposive sampling technique which is one of the non- probability sampling techniques was used in identifying and selecting 25 clients to be respondent of the study such as Ministries, Government departments, Agencies and institutions including Schools and Hospitals located in Dar es Salaam City. This sample technique is used to initially contact a few potential respondents who are then asked to give names of persons or organisations with the characteristics sought for so that the sample size will be reduced with less costs(Trochin and Donelly, 2006). With regard to this study, the Class one contractors that was initially purposively selected was used to give the names of public clients they deal with. The list of publicclients obtained from contractors was further sorted out and the names of required 25 public clients was obtained and targeted for the research.

Table 3.1 Sample sizes and techniques

Category of respondents	Population size	Targeted sample size	Reached sample size	Sampling technique
Contractors	80	25	22	Purposive sampling
Public clients	80	25	19	Snowball sampling

3.5Methods of data collection

The following methods were used in collecting data for this research:

3.5.1 Literature review methods

This is the method of collecting already collected data (secondary data); it has advantages because the researcher is able to collect as much data as possible without limitation (Kothari, 2014). The major sources of secondary data in this study included published books, journals, papers and articles. Electronic materials were also another source where varieties of current materials were obtained which explains a lot about conflicts in construction industry.

This process will cover review of key definitions and concepts relevant to the study and related areas. The key areas covered include; Construction industry generally, conflicts in general, types of conflicts in construction industry, causes of conflicts in construction industries, effects of conflicts in construction industry, strategies of avoiding conflicts in construction industry and summary of literature reviews.

3.5.2 Questionnaire survey

Questionnaire is regarded as the appropriate method for gathering data from a number of respondents within a limited timeframe, owing to the nature of this study (Kothari, 2014). This method was used to gather both qualitative and quantitative information. Questionnaires were prepared and administered to building contractors and clients of public buildings. The purpose of questionnaires was to determine causes of conflicts that occur between building contractors and clients of public buildings, strategies of resolving and ways of reducing and eradicating conflicts that occurs between contractors and clients of public building.

3.5.3 Interviews

According to Kothari (2004), personal interview method requires a person known as the interviewer asking questions generally in a face-to-face contact to the other person or persons (interviewee). Six interviews were conducted with public clients and contractors of three case studies building project. This was done in order to describe the nature of these projects as well as conflicts experienced with regard to causes and management strategies adopted. The content of these interviews were derived from interview protocol (See Appendix B).

3.5.4 Case study

This study comprises two parts; the first part established the causes of conflicts, strategies of resolving conflicts and ways of eradicating and reducing by using survey. The second part provide in-depth study of causes of conflicts, strategies of resolving conflicts and ways of eradicating and reducing by using case study. The choice of using case study was steered by the nature of the study as recommended by Yin (2003) that case study design is mostly applicable in study that seeks to answer *"what"*questions.Apart from that also adoption of case study has proven to work in studying conflicts in construction industry in the context of both developed and developing countries as it has successfully applied by Awakul and Ogunlana (2002), Yates and Hardcastle (2003) and Ntiyakunze (2014).

3.6 Data Analysis Plan

The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-groups. Generally, data analysis involves a number of closely related operations which are performed with the

purpose of summarizing the collected data and organizing these in such a manner that they answer the research questions (Kothari, 2004).

In this study, raw quantitative data collected mainly from closed ended questions in questionnaires were sorted, edited, coded and then entered into computer software which is Statistical Package for Social Science (SPSS). By using this software, the obtained raw data were organized and recorded using percentile, bar charts, and tabulation, which were also used appropriately to draw conclusions. On the other hand, qualitative data collected through interviews and open ended questions in questionnaires were analysed thematicallywhere relevant collected data were developed into subject matters by explaining what was stated by respondents regarding causes of conflicts, strategies of resolving and ways of eradicating and reducing conflicts between public clients and contractors in building projects.

3.7 Chapter Summary

The chapter has outlined the methodology used to conduct the research and answering the research questions that would assist in achieving the objectives set. The study utilizes mixed method approach which combined quantitative and qualitative approaches in data collection and analysis. The studymade empirical investigation and review of case studies by using questionnaires, interviews and case study protocolwhich uses both primary and secondary data collection techniques. The chapter further described location of study and how sample size was selected in this research and all these helped to complete the research as per objectives provided which lead to conclusion.

CHAPTER FOUR

PRESENTATION OF THE RESULTS AND DISCUSSION

4.0 Introduction

This study aimed at examining critical conflict issues that occurs between public clients and contractors in building projects in Tanzania. The main focus of this chapter is to analyse raw data which were collected in the field and presenting and discussing it as main findings of the study. Principally, it provides answers to the research questions which were raised before the research was conducted. Presentation and analysis of findings are organized basing on research objectives and questions that guided this study.Findings are also discussed in the light of the existing related literature.

4.1 Level of Response Rate

This study targeted to reach 50 respondents wherebya total of 50 questionnaires were given to them. As it can be seen in Table 4.1, out of all administered questionnaires only 41 questionnaires were returned and were useable for analysis yielding a total of 86% response rate.Mugenda and Mugenda (2003) recommend the statistically significant response rate for analysis to be at least 50%.

Table 4.1: Targeted and realized number of administered questionnaire

Respondents	Targeted	Realized	Percentage (%)
Contractors	25	24	96
Public clients	25	19	76
Total	**50**	**43**	**86**

Source: Field Survey (2016)

4.2 Characteristics of Respondents

The researcher was interested to identify types of organization that respondents belongs, positions of respondents in organizations and working experience in construction industry in order to know the characteristics of the respondents involved in the study.

4.2.1 Types of Organizations that Respondents Belongs

Findings showed that, out of all 43 reached respondents, 24 (55.9%) of them belongs to contracting firms while the remaining 19 (44.1%) wereclients from various public institutions. From this finding it can be observed that majority of respondents were contractors from contracting firms while remaining respondents were clients from different public institutions. This information are presented in Table 4.2

Table 4.2: Types of organizations that respondents belongs

Types of organization	Frequency	Percentage
Contracting firms	24	55.9
Clients organizations	19	44.1
Total	**43**	**100**

Source: Field Survey (2016)

4.2.2 Years of working experience in construction industry

It was necessary to identify the working experience of the respondents and therefore, respondents were asked to indicate the number of years that they have spent working in construction industry. The finding obtained in this construct are summarized and presented in Table 4.3.

Table 4.3: Number of years of working experience in construction industry

Years	Frequency	Percentage
Less than 5 years	2	4.6
5 years to 10 years	7	16.3
10 years to 15 years	23	53.5
16 years and above	11	25.6
Total	**43**	**100**

Source: Field Survey (2017)

Table 4.3 shows that two (4.6%) respondent had been working in construction industry for less than five years, 7 (16.3%) respondents had been working in construction industry for a period that ranges from 5 years to 10 years, 23 (53.5%) respondents had been working in construction industry for a period that ranges from 10 years to 15 years and 11 (25.6%) had a working experience of more than 16 years in construction industry. From this finding, it can be established that majority of respondentsof this study were experienced enough in construction industry which were key in ensuring that they provide valid information regarding conflicts that occurs between contractors and public clients.

4.2.3 Educational Level of Respondents

Another sample characteristic examined was the educational level of the respondents. It was found that, the majority of the respondents were first degree holders as 23 (53.5%) respondents mentioned to have graduated with bachelor degree. On the other hand, 14 (32.6%) respondents were postgraduate/ masters degree holders. Further to that, six (13.9%) respondents were diploma and certificate holders. There were no

respondents who were having primary education, secondary education and being illiterate. Given this finding, it can be put forward that large number of respondent were bachelor degree holders hence who is considered to be educated knowledgeable enough to give reliable and valid responses. This finding is presented in Table 4.4 below.

Table 4.4: Education level of respondents

Level of Education	Frequency	Percentage
Degree	23	53.7
Postgraduate/ Masters	14	32.6
Diploma/ Certificate	6	13.9
Doctorate	-	-
Illiterate	-	-
Total	**43**	**100**

Source: Field data (2017)

4.3 Empirical survey findings

4 3.1 Factors that causes occurrence of conflicts between public clients and contractors

The first objective of the study sought to identify factors that led to conflicts between public clients and contractors in construction projects in Tanzania. Information regarding this objective is presented in the following sub sections:

4.3.1.1 Presence of conflicts between public clients and contractors

In order to unveil causes of conflicts between public clients and contactors, the researcher wanted to know, in the first place, whether conflicts between public

clients and contractors do occur. Two questions were set; the first question asked public clients to state whether they have ever had conflicts with contractors, the second question asked contractors to state whether they have ever had conflicts with public clients. Table 4.5 summarizes and presents the field data as it was obtained from public clients and contractors.

Table 4.5: Presence of conflicts between public clients and contractors

Category of respondents	**Frequency of response**		
	Yes	**Not sure**	**No**
Public clients	16	2	1
Contractors	22	2	0

Source: Field data (2017)

Table 4.5 indicates that, majority of public clients admitted that they have had conflict with contractors as out all 19 public clients, 16 of them agreed that have had conflict with contractors while two of them were not sure whether they have had conflict with contractors and one disagreed to have had conflict with contractors. On the other hand, like it was responded by public clients, majority of contractors admitted that they have had conflict with public clients as out all 24contractors, 22 of them agreed that have had conflict with public clients while 2 of them were not sure whether they have had conflict with public clients and none of contractors disagreed to have had conflict with public clients. Given this finding, it can be put forward majority of public clients and contractors have fall into disagreement in the course of executing their duties.

4.3.1.2 Extent of occurrences of conflicts between public clients and contractors

Public clients and contractors who admitted to have had conflicts were then asked to rate whether those conflicts occurs always, moderate or rarely. The results are presented in Table 4.6 shows that out of all 22 contractors who agreed to have had conflicts with public clients, two of them mentioned that those conflicts occurs frequently, 15 of them mentioned that those conflicts occurs at a moderate rate and five of them said that their conflicts with public clients rare occurs. On the other hand, out of all 16 contractors who admitted to have had conflicts with public contractors, one of them mentioned that their conflicts with public clients occur frequently, eight of them mentioned their conflicts with public clients moderately occurs and seven of them highlighted their conflicts with contractors rarely occurs. From this finding, it can be established that majority of contractors and public clients had moderate rate of occurrences of conflicts among them.

Table 4.6: Extent of occurrences of conflicts between public clients and contractors

Category of respondents	**Frequency of response**		
	Frequently	**Moderately**	**Rarely**
Contractors	2	15	5
Public clients	1	8	7
Total	3	23	12

Source: Field data (2017)

4.3.2 Factors that leads to conflicts between public clients and contractors in construction projects

In this part, the study sought to establish factors that lead to conflicts between pubic Fs and contractors in construction projects. Information related to this part was collected from building contractors and clients of public buildings. By using questionnaires, respondents were requested to unveil the most factors that influences occurrence of conflicts among seven factors that were presented to them. Information obtained in this part are summarised and presented in Table 4.7.

Table 4.7 Critical causes of conflicts between contractors and public clients in building projects

Causes	Mean score			Rank
	Contractors	Clients	Average	
Error and Omission in Project Design	2.51	2.33	2.42	2
Ambiguities in contract document	2.29	2.33	2.31	6
Delay in payment	2.40	2.33	2.36	4
Inaccurate valuation	2.38	2.42	2.40	3
Failure to adhere on agreed terms in contract	2.37	2.31	2.34	5
Improper planning and scheduling	2.56	2.51	2.53	1
Ineffective communication	2.29	2.28	2.28	7

Source: Field data (2017)

4.3.2.6 Improper planning and scheduling

Table 4.7 shows that improper planning and scheduling had a mean value of 2.53 and was ranked in a first position among seven main causes of conflicts that occurs between contractors and publicclients in building projects. This factor comprised six related causes of conflicts between publicclients and contractors whereby contractors' failure to price properly for the works and rigid budgets control by the client respectively were ranked in first position. This was followed by failure to choose the appropriate procurement method and Unclear and incomplete description of items in the bills of quantities respectively which were ranked in third position, disruptions and delays by the contractor that create deviation from initial programme of works was ranked in a fifth position and delays in the supply of working drawings were the least ranked cause of conflicts between publicclients and contractors. This findings as shown in Table 4.8 reveals that improper planning as cause of conflicts between contractors and public clients mainly occurs when contractors' failure to price properly for the works and rigid budgets control by the client.

Table 4.8: Improper Planning and Scheduling

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
Contractors' failure to price properly for the works	2.48	2.63	2.55	1
Rigid budgets control by the client.	2.61	2.50	2.55	1
Delays in the supply of working drawings	2.61	2.42	2.51	6
Failure to choose the appropriate procurement method	2.60	2.48	2.54	3
Disruptions and delays by the contractor that create deviation from initial programme of works	2.46	2.59	2.52	5
Unclear and incomplete description of items in the bills of quantities	2.60	2.48	2.54	3
Average mean	2.56	2.51	2.53	

Source: Field data (2017)

4.3.2.1 Error and Omission in Project Design

Error and omission in project design had a mean value of 2.42 and was ranked in second position among seven main causes of conflicts that occurs between contractors and clients in building projects. This factor were further divided into four related causes of which conflicts between contractors and public clients due to changes or modifications of scope that increase consequential costs beyond initial cost and which conflicts between contractors and public clients due design professional's failure to remain within the public clients project budget and design objectives were ranked in a first position. This was followed by conflicts between contractors and public clients due to clients' design vision not communicated effectively to the design team and over design and under estimating the cost involved which were all of them ranked third. From these findings it can be established that

conflicts that occurs between contractors and public clients due to error and omission in project design are frequently related to changes or modifications of scope that increase consequential costs beyond initial cost and design professional's failure to remain within the client's project budget and design. These findings are presented in Table 4.9 below.

Table 4.9: Error and Omission in Project Design

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
Changes or modifications of scope that increase consequential costs beyond initial cost	2.64	2.26	2.45	1
Clients design vision not communicated effectively to the design team	2.36	2.43	2.39	3
Design professional's failure to remain within the clients project budget and design objectives	2.63	2.27	2.45	1
Over design and under estimating the cost involved	2.41	2.38	2.39	3
Average mean	2.51	2.33	2.42	

Source: Field data (2017)

4.3.2.4 Inaccurate valuation

Inaccurate valuation had a mean value of 2.40 and was ranked in third position among seven main causes of conflicts that occurs between contractors and clients in building projects. This factor were further divided into four related causes whereby over measurement or under measurement of works by consultants for work in progress was ranked first, unrealistic claims for variations of works by contractors was ranked second, poor and unfair allocation of project risk was ranked and the least ranked cause in this factor under invoicing and over invoicing by contractors.

From these findings which are presented in Table 4.10it became evident that error and omission in project design as a factor that cause conflicts between contractors and clients are due to the reason that there is a tendency of over measurement or under measurement of works by consultants for work in progress which ignite conflicts between public clients and contractors in buildings projects.

Table 4.10: Inaccurate valuation

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
Unrealistic claims for variations of works by contractors	2.36	2.49	2.42	2
Under invoicing and Over invoicing by contractors	2.28	2.38	2.33	4
Poor and unfair allocation of project risk	2.46	2.30	2.38	3
Over measurement or under measurement of works by consultants for work in progress	2.42	2.53	2.47	1
Average mean	2.38	2.42	2.40	

Source: Field data (2017)

4.3.2.3 Delay in payment

Delay in paymentscored a mean value of 2.36 and was ranked in fourth position among seven main causes of conflicts that occurs between contractors and clients in building projects. Delay in payment as a major factor were further divided intotwo other related causes which are failure of the client to honour payments as and when due which was ranked in first position and poor financial arrangements by the clients leading to late payments. These findings unveils that conflicts between clients and

contractors occurs mostly when clients fails to honour payments as and when due. These findings are presented in Table 4.11 below.

Table 4.11:Delay in payment

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
Failure of the client to honour payments as and when due	2.42	2.36	2.39	1
Poor financial arrangements by the clients leading to late payments	2.38	2.30	2.34	2
Average mean	2.40	2.33	2.36	

Source: Field data (2017)

4.3.2.5 Failure to adhere on agreed terms in contract

Failure to adhere on agreed terms in contract had a mean value of 2.34 and was ranked in a fifth position among seven main causes of conflicts that occurs between contractors and clients in building projects. This factor were further divided into four related causes whereby failure to use specified materials, skilled operatives and recognized methods was ranked first, non - availability of specified materials was ranked second, acceleration of works requested by client that affected schedule was ranked in a third position and the least ranked cause in this factor was disruptions or delays to the works caused by client. From these findings which are presented in Table 4.12 it can be established that failure to use specified materials, skilled operatives and recognized methods is main reason that fuel conflicts relating with failure to adhere on agreed terms in contract between clients and contractors in buildings projects.

Table 4.12: Failure to adhere on agreed terms in contract

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
Non - availability of specified materials	2.38	2.32	2.35	2
Acceleration of works requested by client that affected schedule	2.38	2.28	2.33	3
Failure to use specified materials, skilled operatives and recognised methods	2.34	2.40	2.37	1
Disruptions or delays to the works caused by client	2.38	2.25	2.31	4
Average mean	2.37	2.31	2.34	

Source: Field data (2017)

4.3.2.2 Ambiguities in contract document

An ambiguity in contract document had a mean value of 2.31 and was ranked in sixth position among seven main causes of conflicts that occurs between contractors and clients in building projects. Ambiguities in contract document as a main factor was further divided into six related causes whereby lack of clarity regarding the time from which contractor can calculate interests on late payments was ranked as first. This was followed by contractor's failure to read the contract documents in second position, lack of understanding and agreement on the type of contract between the client and the contractor in third position, contractors fundamental misunderstanding of what is allowable under the terms of the contract in fourth position, clients expectations at variance with contract documentation in fifth position and inadequate descriptions of the preliminary items in the bills of quantities are ranked in sixth position. These findings reveal that lack of clarity regarding the time from which contractor can calculate interests on late payments is most cause of conflicts between

contractors and clients related with ambiguities in contract document. These findings are presented in Table 4.13.

Table 4.13: Ambiguities in contract document

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
AMBIGUITIES IN CONTRACT DOCUMENT				
Contractor's failure to read the contract documents	2.28	2.41	2.34	2
Lack of understanding and agreement on the type of contract between the client and the contractor	2.25	2.40	2.32	3
Lack of clarity regarding the time from which contractor can calculate interests on late payments	2.30	2.41	2.35	1
Contractors fundamental misunderstanding of what is allowable under the terms of the contract	2.22	2.41	2.31	4
Clients expectations at variance with contract documentation	2.38	2.21	2.29	5
Inadequate descriptions of the Preliminary Items in the Bills of Quantities	2.36	2.19	2.27	6
Average mean	2.29	2.33	2.31	

Source: Field data (2017)

4.3.2.7 Ineffective communication

Ineffective communication had a mean value of 2.28 and is the least mentioned among seven main causes of conflicts that occur between contractors and public clients in building projects. This factor comprised four related causes of conflicts between public clients and contractors whereby Non-responses to questions or resolutions of problems presented by one party in the contract to another party in the contract and Incomplete or inaccurate responses to problems presented by one party

in the contract to another party in the contract respectively is ranked in first position. This is followed by unclear lines of communication in third position, late information delivery in fourth position and the least mentioned cause is unconfirmed oral instructions. These findings are presented in Table 4.14.

Table 4.14: Ineffective communication

Potential causes of conflicts between clients and contractors	Mean score			Rank
	Contractors	Clients	Average	
Non-responses to questions or resolutions of problems presented by one party in the contract to another party in the contract	2.32	2.31	2.31	1
Incomplete or inaccurate responses to problems presented by one party in the contract to another party in the contract	2.31	2.32	2.31	1
Unconfirmed oral instructions	2.26	2.25	2.25	5
Late information delivery	2.28	2.26	2.27	4
Unclear lines of communication	2.28	2.29	2.28	3
Average mean	2.29	2.28	2.28	

Source: Field data (2017)

4.3.3 Approaches used in resolving conflicts that occurs between public clients and contractors

This section of the study sought to find out approaches employed by public clients and contractors in resolving conflicts that occurs between them. Main causes of conflicts were presented through questionnaires and respondents were asked to mention specific approach that has been applied in resolving conflicts that emanates

from main causes of conflicts, the findings of this part are summarized and presented in Table 4.15.

Table 4.15: Approaches used in resolving conflicts that occurs between public clients and contractors

Causes	Strategy	Frequency			Rank
		Contractor	Client	Total	
1. Error and Omission in Project Design	Avoiding	4	2	6 (13.9%)	3
	Obliging	1	3	4 (9.3%)	4
	Forcing	-	-	-	5
	Compromising	5	3	8 (18.6%)	2
	Integrating	10	15	25 (58.1%)	1
2. Ambiguities in contract document	Avoiding	-	-	-	4
	Obliging	-	-	-	4
	Forcing	5	3	8 (18.6%)	3
	Compromising	16	6	22 (51.1%)	1
	Integrating	8	5	13 (30.2%)	2
3. Late issue of payment	Avoiding	-	-	-	4
	Obliging	-	-	-	4
	Forcing	8	0	8 (18.6)	3
	Compromising	5	6	11 (25.6%)	2
	Integrating	9	15	24 (51.5%)	1
4. Inaccurate valuation	Avoiding	3	2	5 (11.6)	3
	Obliging	-	-	-	5
	Forcing	1	2	3 (6.9)	4
	Compromising	8	5	13 (30.2%)	2
	Integrating	15	7	22 (51.2)	1
5. Ineffective communication	Avoiding	-	-	-	4
	Obliging	-	-	-	4
	Forcing	3	5	8 (18.6)	3
	Compromising	11	9	20 (56.6%)	1
	Integrating	13	12	15 (34.9%)	2
6. Failure to adhere on agreed terms in contract	Avoiding	-	-	-	4
	Obliging	-	-	-	4
	Forcing	11	6	17 (39.5%)	2
	Compromising	4	4	8 (18.6%)	3
	Integrating	8	10	18 (41.8%)	1
7. Improper planning and scheduling	Avoiding	-	-	1 (2.32%)	4
	Obliging	-	-	-	5
	Forcing	6	-	6 (13.9%)	3
	Compromising	7	6	13 (30.2%)	2
	Integrating	11	12	23 (53.4%)	1

Source: Field data (2017)

As it can be seen in Table4.15, the question regarding approaches used in resolving conflict was responded by 43 respondents who were public clients and contractors. With regard to conflicts relating to errors and omission in project design, majority of respondents mentioned that they tend to use integrating approach in resolving it, these respondents were 25 (58.1%) out of all 43 respondents. This is followed by compromising approach, which was mentioned to be used by 8 (18.6%) respondents, six (13.9) respondents mentioned to use avoiding approach and four (9.3) mentioned to use obliging approach.

As shown in Table 4.15, majority of respondents mentioned that they prefer to use compromising approach in resolving conflicts relating to ambiguities in contract document, this fact was given out by 22 (51.1%) respondents, this was followed by integrating approach that was mentioned to be used by 13 (30.2%) respondents and eight (18.6%) mentioned to use forcing approach. None of the respondent highlighted to use avoiding and obliging approaches in resolving conflicts emanated from ambiguities in contract document.

Concerning conflicts relating to late issue of payment, majority of respondents mentioned that they frequently use integrating approach in resolving conflicts relating to delaying in payment, this fact was given out by 24 (515.8%) respondents, this was followed by compromising approach that was mentioned to be used by 11 (25.6%) respondents and eight (18.6%) mentioned to use forcing approach. None of the respondent highlighted to use avoiding and obliging approaches in resolving conflicts relating to late payments.

Moreover, Table 4.15 indicates that majority of respondents prefer to use integrating approach in resolving conflicts relating to inaccurate valuation, this was mentioned by 22 (51.2%) respondents. This was followed by compromising approach, avoiding and forcing. None of the respondents mentioned to prefer the use of obliging approach in resolving conflicts associating with inaccurate valuation.

Table 4.15depicts that majority of respondents mentioned that they prefer to use compromising approach in resolving conflicts relating to ineffective communication, this fact was given out by 20 (56.6%) respondents, this was followed by integrating approach that was mentioned to be used by 15 (34.9%) respondents and eight (18.6%) mentioned to use forcing approach. None of the respondent highlighted to use avoiding and obliging approaches in resolving conflicts cultivated from poor communication.

Furthermore, conflicts relating with failure to adhere on agreed terms in contract are mostly solved by using integrating approach, these preference was mentioned by 18 (41.9%) respondents. This is followed by forcing and compromising while avoiding and obliging approaches was at all not mentioned to be preferred by respondents.

Lastly, majority of respondents prefer to use integrating approach in resolving conflicts relating to improper planning and scheduling, this was mentioned by 23 (53.4%) respondents. This was followed by compromising, avoiding and forcing approaches. None of the respondents mentioned to prefer the use of obliging approach in resolving conflicts associating with improper planning and scheduling.

In the light of this finding, it can be established that, integrating and compromising are approaches that have mostly being used in resolving conflicts that occurs between contractors and public clients.

4.3.4 Measures of preventing and reducing conflicts between contractors and public clients

Under this part, the respondents were asked to recommend measures to be taken so as to prevent and reduce occurrence of conflicts between public clients and contractors. The findings of this objective are summarized and presented in Table 4.16.

Table 4.16: Measures of preventing and reducing conflicts between contractors and public clients

Methods of preventing conflicts in building projects	Frequency			Percentage
	Contractor (n=24)	Clients (n=19	Total (n=43)	
Early negotiations	24	19	43	100
Adequate contract documentation	24	16	40	93
Designing contract conditions that are fair to all parties(allocating projects risks fairly to all parties)	20	19	39	90.6
Team building including the introduction of partnering approaches to establish common objectives	24	19	43	100
Communication of potential problems or claims at the earliest opportunity	24	19	43	100
Choosing the appropriate project delivery method (procurement system)	21	17	38	88.3
Anticipating and recognizing the enhanced potential for conflicts and preparing to address them	10	12	22	51.1

Source: Field data (2017)

Table 4.16 indicates that, early negations, team building and Communication of potential problems or claims at the earliest opportunity were the methods that were recommended by all 43 (100%) surveyed contractors and publicclients as a mechanism of reducing and eradicating conflicts that occurs between contractors and public clients. Moreover, out of all 43 respondents, 40 (93%) respondents mentioned, of whom 24 were contractors and 16 were clients, recommended adequate contract documentation. 39 (90.6%) respondents, of whom 20 were contractors and 19 were clients recommended Designing contract conditions that are fair to all parties. 38 (88.3%) respondents, of whom 21 were contractors and 17 were clients recommended Designing contract conditions that are fair to all parties and 22 (51.1%) respondents, of whom 10 were contractors and 12 were clients recommended Designing contract conditions that are fair to all parties

4.4 Case study

4.4.0 Introduction

This section presents and analyzes the findings that were collected from building projects in Tanzania. The findings were obtained from three (3) building projects which all of them were new construction works. Building projects were selected as case studies with aim of unveiling how conflicts took place in the course of building those projects. The presentation of findings are structured in concurrence with research questions and objectives as explained in Chapter One by; briefly describing the projects, analyzing factors that causes occurrence of conflicts between publicclients and contractors of selected building projects and analyzing how conflicts in those projects were managed and mitigated.

4.4.1 Case Study One

This part presents an explanation and discussion on conflicts which occur in case study one. After identification of conflicts, the issue or area of conflict is discussed, it also discuss its causes and how it rose and surfaced and how it was handled in terms of strategies and mechanisms employed in its management.

4.4.1.1 Brief Description of the Project

The first case study involved construction of Administration building, Energy building, Power house and the associated infrastructure works counting; electricity, roads, gas network, landscaping, water storage tank and supply system and drainage system. The project required contractor to provide all basic facilities required for making part of an industry. The project was designed by a foreign architect based on experience gained from engagement on other similar projects done in Far Eastcountries. Basing on initial design, a team of local consultants were procured and they were required to adopt the design and make amendments and improvement in order to suit and meet the terms of local requirements in Tanzania.

In 2012 local consultants were required by the client to review the design drawings and prepare tender documents within a short period of time the bid documents were prepared and the bidders were invited for bidding. Only class one buildings/ civil contractors registered with Contractors Registration Board (CRB) were required to bid.Among all prequalified bidders who were selected a tender waswon by a Construction company which is registered as a local Class Onecompany.The company started to run the project in July 2012 and it was required to complete it by 2015.

The contract amount for the project was Tsh. 7,973,656,541.30 and later on the Addendum 01 for steel erection was added amounting Tsh. 680,318,498.00, which lead to total contracting amount of Tsh. 8,653,975,039.30. Due to various conflicts and variations during implementation of the project, construction cost rise from Tsh.8, 653,975,039.30 to Tsh.10, 969,678,521.91.

As the project started early July 2012 it was intended to be completed on November 2012,but unfortunately the project were completed 2015 due to various misunderstandings between contractor and client.

4.4.1.2 Theoretical contextualization of case study one building project

This section presents findings from case study one building project in relation to the Principal agent theory. This analysis has specifically being done in order to describe case study in the light of the perspective of theoretical framework and to show how the case study illustrates the elements of theoretical framework. The elements considered for principal agent theory is hidden characteristics, hidden information and hidden intentions and how cause adverse selection problem, moral hazard risks and hidden intentions.

4.4.1.3The Principal- Agent theory

The principal-agent theoryin case study one project is used to express relationship between key participants who were responsible for successfully completion of case study one project. The theory explains the relationship between the project owner as principal and the contractor as an agent. In this project, the owner referred to as principal was responsible of providing required financial resources for its delivery, accepts the project milestones and project completion. On the other hand, contractor referred to as agentwas hired by the owner to perform all the activities required to

complete the project.According to the principal-agent theory, the relationship between the two parties also involves self interest of each party whereby the main interest of the owner was completion of the project so that it can start to run intended activities while the interest of the constructor was completion of the project so as to be paid agreed amount. The project owner and the contractor delegated their tasks to their project managers. Therefore, four different parties were involved in the project even before its execution starts

Moreover, the project owner acted as the principal in relation to both the project owner's project manager and contractor as agents and the contractor acted as the principal in relation to the contractor's project manager. Therefore, there are two principals and three agents involved, where the contractor was both a principal and agent in a project. These made a total of four parties who worked together in case study one project. These participants shared importantinformation in order to meet main project's targets:time, cost, and quality. However, because of self interest, not all parties effectively shared all the information all of the time. Therefore, the following types of information asymmetries apply for acting parties: hidden characteristics, hidden informationand hidden intention.The situation in which one of the two cooperation partners is better informed than the other is characterized by asymmetric information. The following types of information asymmetries applied for acting parties: hidden characteristics, hidden information and hidden intention. Respectively, these three types of information asymmetries generate following risks: adverse selection, moral hazard and hold-up.

Hidden characteristics cause the adverse selection problem before the contract is signed between the parties involved. The adverse selection problem occurs in the early phases of the project. This challenge was not observed in case study one project. This might have been caused by the reason that the project owner was having all the information about the contractor before the contractor is hired. Similarly, the project owner was having all the information about the project manager before hiring. The same holds for the contractor and the project manager working on the contractor's behalf.

Hidden information or hidden action causes the moral hazard risk. This occurs after the contract is signed between involved parties. In case study one project all important participants were potentially involved in the moral hazard problem. After the relevant contracts were signed and the project owner has hired the contractor and the project manager, and after the contractor has hired the project manager, not all information was shared in an appropriate way because of the self interest of all the parties involved.

Hidden intentions tend to cause hold-up problems. The project owner invested some money at various stages of the project and trust that the contractor will cooperate, but it can happen that the contractor will actually behave not as intended. In this projects the completion of the building were having some deficiencies that made a client not to accept the project during the time it was supposed to be handed over. This caused delaying in completion of this project. The same holds in the opposite direction. The contractor can also invest some money at any stage of the project and trust that the project owner will cooperate, but it can happen that the project owner will not to do

as agreed. In this project, it was reported that owners of the project did not pay agreed amount and provide required materials on time which hinder smooth execution of contractors' activities which caused delaying in completion of case study one project.

4.4.1.4 Conflicts that occurred in case study one

The following are causes of conflicts as it was unveiled by members of project:

Delay in payment

Delay in paying agreed amount was raised up a as factor that led to conflict in project one. It was noted that contractor applied for payment and then team of consultants certified requested amount of money based on valuation done. Thereafter, the client did not pay the amount of money certified within the period stipulated in contract. This led to emergence of conflicts between contractor and client. The emerged conflict was further fuelled when client failed to pay interest amount that was charged to client after failing to pay certified amount on due time.

The mechanism laid down in the contract document to deal with such conflict requiredclient to pay interest amount to those delayed certified payment. The interest charges were supposed to be paid in the next certificate but for this case it was not done in some certificates. Then, the client had to ask for negotiation meeting in order to find ways forward of resolving the matter unfortunately it did not work. Thereafter, contractor decided to take the matter to the Court for further legal decision. Up to the time of conducting this research payment was not yet done.

Basing on responses provided with regard to this conflict, it can be observed that, most of efforts of resolving it used integrating approach whereby both client and contractor sat for discussion in order to find out a constructive solution although their agreement were not enforced. Moreover, the decision to forward the conflict to the Court was taken by the contractor can be associated with forcing approach of resolving conflict as what was done using power in order to resolve the conflict.

Inaccurate valuation

In relation to inaccurate valuation it occurred in project one when certificate was applied by the contractor for payment and then there were deficiencies in amount that was certified by the consultancy. This distorted the budget of a contractor who relies on initial budget for completion of a project.

Table 4.17: Certificate of payment in Case study One

Certificate No.	Amount Applied by contractor	Amount Certified in valuation by consultant
08	1,383,926,000.96	1,172,042,973.18
02	1,438,096,073.93	930,099,490.45
10	788,608,335.18	614,298,648.22
03	859,301,843.49	619,526,385.89
12	1,052,361,300.15	646,094,053.00
04	1,154,270,125.78	136,063,699.00

The main reasons for the differences/inaccurate valuation as stated by the consultant was contractor's behavior of submitting exaggerated claims such as the claim even for the work which was not yet done at site.

It was informed that in order to resolve that there were a series of meeting including monthly meeting whereby the matter was set as an agenda and being discussed intensively hence agreement was reached that once contractor apply for payment should apply as per work done only and not otherwise and there were thorough follow up by consultant during valuation on solving this conflict. Basing on explanations provided by respondents it can be established that conflict related with inaccurate valuation in case one was resolved by using integrating approach whereby both parties that of contractor and client thoroughly held discussion in order to find a solution that were useful to both sides.

Failure to adhere on agreed terms in contract

The client fall into disagreement with the contractor at the time when the contractor was suppose to complete the building project. During this time, the client observed that the contractor failed to adhere on agreed terms in contract by not completing the project as it was agreed in contractor as there were cracks in road surfaces and linkage into plumbed pipes. Due to these deficiencies in completion of the project, the contractor was requested by the client to work again in order to clear the observed defects and this task was done by the contractor. After passage of time, the client observed the same defects that were already cleared by the client. Thereafter, the contractor was asked again to work in order to clear the defects but the contractor refused to do so because defects liability period had already passed.

On solving this before defect liability period lapse there were management meeting were contractor agreed to clear the cracks and leakage to the pipes at a time and he do so. After the defect liability period end the contactor gave the condition to the client that he must pay the balance amount so that he can clear the defects and the client refuse by blaming the quality of road work was poor hence contractor fail to adhere on agreed terms of contract again up to the time for this research the cracks are not cleared and there is balance amount of contractor.

Improper planning and scheduling

The duration of construction period was four months, it was scheduled to start on July 2012 and being completed on November 2012 At the time when the project was supposed to be handled over to the client it was still far from being completed due to the reason that the scheduled time of completion was not properly foreseen and consideration was not paid on other factors including site conditions whereby there were heavy rainfalls that affected the progress of the project. Failure to be within stipulated time by the contractor was source of conflicts between contractor and client because the client highly demanded the completion of the project as it was highly demanded in order to run its activities. After observing this, the contractor started to apply for extension of period but this request was not accepted by the contractor as the building was highly demanded to be completed so as to start run its activities. It was until further many requests made by the contractor then client accepted to extend the time.

In order to resolve this conflict, compromising approach was used by client on resolving a conflict with contractor while integrating approach was used by

contractor on resolving a conflict with a client. Compromising approach was adopted by the client by identifying a solution that is partially satisfactory to both sides by agreeing to extend the time of completion of a project. Decision reached by the client were partially satisfactory to client because at that time the project was supposed to have already been completed and starting to run required activities and also partially satisfactory to contractor who decided to request for extension of time which implied that he was out of planned activities something which might have limited the contractor to start and concentrate in other projects. On the other hand, contractor adopted integrating approach by finding solution that is constructive to both sides by applying for extension of period for completion of project as agreed on contract. This benefited both sides as it ensured quality of work which was what required by the client and by doing so the contractor maintained his reputation.

4.4.2 Case Study Two

4.4.2.0 Introduction

This part presents an explanation and discussion on conflicts which occur in case study two. After identification of conflicts, the issue or area of conflict is discussed, it also discuss its causes and how it rose and surfaced and how it was handled in terms of strategies and mechanisms employed in its management.

4.4.2.1 Description of the Project

Project representing case study two is construction of balance works for proposed construction of market. The project mainly includes construction of variety of buildings that including shops, garbage room, gate house, power house and the associated infrastructure works counting; landscaping, roads, electricity, water

storage tank and supply system and drainage system. The project required to provide all basic facilities that customers and traders can stay and run their business that involves buy and sell of their commodities hence generate income to the government and themselves.

Design of the project was done by local Architect together with a team of local consultants who were procured purposely for the project. The local consultants were engaged since the early stage of the project and were required by the client to design drawings and prepare tender documents within a short period of time the bid documents were prepared and the bidders were invited for bidding. Only prequalified class one buildings/ civil contractors registered with Contractors Registration Board (CRB) were required to bid. Site possession was 12 June, 2014 mobilization period one month then Project commencement was in 11 July, 2014 and was planned to be completed by 10 March, 2015 it was a contract of eight months.

The key participants in this project were; the client who was a public institution, the financier who was one of the commercial Bank, design team (consultants), main contractor and approved domestic sub-contractors for electrical installation.

The contract amount for the project was Tsh. 5,300,000,000.00 Due to various conflicts and variations during implementation of the project, construction cost rise from Tsh.5,300,000,000.00 to Tsh.7, 421,519,657.70 on completion. Type of contract which was used is PPRA.

4.4.2.2 Theoretical contextualization of case study two building project

This section presents findings from case study two building project in relation to the Principal agent theory. The aim of this part is to describe case study two building project in the light of the perspective of theoretical framework and to show how the case study illustrates the elements of theoretical framework. The elements considered for principal agent theory is hidden characteristics, hidden information and hidden intentions which tend to cause adverse selection problem, moral hazard risks and hidden intentions.

4.4.2.3 The Principal- Agent theory

Like other projects, this project comprises different stakeholders including the owner who was responsible of providing required financial resources for its delivery, accepts the project milestones and project completion; the owner of the project has been referred to as principal basing on Principal- Agent theory. The owner hired the contractor referred to as agent, the contractor perform all the activities required to complete the project.t. In this project contractor was a principal of a contractor who was an agent. According to the principal-agent theory, the relationship between principal and agent involves self interest of each party whereby the main interest of the owner was completion of the project so that it can start to run intended activities while the interest of the constructor was completion of the project so as to be paid agreed amount.

Unlike case study one project, in case study two project there was no a project manager of project owner and projector manager of a contractor due to the nature of

project which was a short term project. There consultant was overall charge of a particular project on client's behalf irrespective of the title.

Therefore, there was one principal and two agents involved, where the contractor was a principal and contractor and consultant were agents in a project who were required to work closely in order to meet main project's targets: time, cost, and quality. These made a total of three parties who worked together in case study one project.

These participants shared important information in order to meet main project's targets: time, cost, and quality. However, because of self interest, not all parties effectively shared all the information all of the time. Therefore, the following types of information asymmetries apply for acting parties: hidden characteristics, hidden information and hidden intention. Respectively, these three types of information asymmetries generate following risks: adverse selection, moral hazard and hold-up.

Hidden characteristics cause the adverse selection problem before the contract is signed between the parties involved. The adverse selection problem occurs in the early phases of the project. Hidden characteristics cause adverse selection. This occurred in the course of constructing case study two building project particularly by the first contractor who made contract with a client to construct a project but failed to complete the project as agreed. This was unveiled to be caused by the reason that the chosen contractor did not mobilize all of his efforts in order to complete construction activities as agreed in contract.

Hidden information or hidden action causes the moral hazard risk. According to Principal- agent theory, hidden information or hidden occurs after the relevant contracts have been signed and the project owner has hired the contractor and the project manager, and after the contractor has hired the project manager, not all information is being shared in an appropriate way because of the self interest of all the parties involved which leads to misunderstanding. In this project this occurred after contractor and owner of the project made an agreement on contract bill with fixed quantity. But during execution of the work, the contractor found study there was excess of work and contractor carried out those works which out of their agreement. Thereafter, the contractor applied for payment based on the work done. But what was approved by the consultant was basing on what initial agreement between client and contractor which leads t misunderstanding between project owner and contractor.

Hidden intentions tend to cause hold-up problems. In case study two, project owner like other owners paid money to the first and second contractors at different stages of construction with the expectation of completing the project on due time. But this expectation of the owner was not implemented as contractors failed to hand over the project as agreed on contractor. This affected the owner in many ways including incurring of extra cost and loss of money due to failure of the project to operate on a right time. The same holds to side of contractor. The contractor can also invest some money at different stage of the project and trust that the project owner will cooperate, but the owners fails to provide money and materials on time that affected the contract in terms of money and time.

4.4.2.4 Analysis of conflicts that occurred in case study two

This part presents an explanation and discussion on conflicts which occur in case study two which is described above. It present the cause of conflict and how it rose and surfaced and how it was handled with regard to strategies and mechanisms employed in its management.

Excess variations

Occurrence of conflict in case study two was mainly ignited by provisional of additional works contrary to what was laid down in the contract document. Additional and changes of works contrary to what was agreed in contract caused variations of bills of quantities (BOQ). The total number of variations issued for the whole project was T.shs.2, 313,564,815.00 with total net additional of T.shs. 1,331,480,725.00. Total variations are 43.65% of the total contract value of work planned to be done. That implies that many changes and addition were introduced to the contract, contrary to what was estimated before while the amount allowed in contact document as contingency and provisional sum for such changes and addition works was T.shs.960,154,240.00 in total

It was explained that the main cause of variations was false impression of the intended scope of works as most of the structure part of the building were built by another contractor. The client's target was to complete the buildings and other services so as to achieve a purposeful state of building at a minimum possible cost and to the earliest hence the scope of works in the contract was done within required boundaries. During implementation some changes and addition works were in evitable for the building to be useful. For the variation to be executed there must be

approval by consultant first then client, for our case as the building was agent some variations were executed before approval by client and at the end this lead to conflicts as the variations exceed the contingency and provisional sum amount set in the contract.

This was solved after the client's technical unit was involved in the certification of the variations and addition works, and it was agreed by both parties for any new variation and addition works proposed in future should be submitted for consideration in every site monthly meetings.

Difference in Evaluation

In this cases study two the conflicts raise once the amount applied by the contractor was against actual amounts certified by the consultant for payment whereby amounts certified by the consultant for most of certificates were low compared to the corresponding amounts applied for payment by the contractor to be paid by client. The causes of this was by contractor as per consultant, contractor applied for payment even for the works which was not yet done hence the approval was as per work done , therefore giving rise to conflict in evaluations process.

The solution of the difference based to the project, members were required to confirm of such claims applied with supporting documents before approval.

Pricing Errors in Contract Document (BOQ)

Conflict here rise due to some items of similar/same nature being priced differently in the BOQ. This led to conflicts when pricing variations and additional works of similar/same type and nature. Contractor price the item at high price in the variation works while consultants approve the same item at lower price, this lead to conflicts

between contractor and consultant and later to client example to some excavation of depth not exceeding 3.0 meter item some page were priced 5000/m3 and same item other page priced 15000/m3 from this once variation occurs the contractor will consider high price while the consultant will take the low price. In practice this error could be communicated and solved earlier during tendering stage before signing of the contract and commencement of the project.

This conflict was solved by setting realistic prices from basic principles of estimating rather than adapting any stated in the contract, which were debatable.

Delayed in Honoring Payment

Conflicts in this area rise when the time agreed for payment of certified amount in some certificates against the time when payments were made by the client, the period agreed for payment was as per contract 28 days failure to do that would require to pay the contractor interest on all delayed payments for the period, delayed at commercial bank rate required, the main causes for delaying payment were processing of payment and bureaucracy which is found within the client organization.

On solving this there were progress reports on the payment issued in every certificate which was read out for every monthly meeting to check the status of payment regardless of the interest charged on top for every delayed payment.

4.4.3 Case Study Three

4.4.3.1 Introduction

This part presents an explanation and discussion on conflicts which occur in a case study three. It presents a brief description of the project, the issue or area of conflict

is discussed, it also discuss its causes and how it rose and surfaced and how it was handled in terms of strategies and mechanisms employed in its management.

4.4.3.2 Description of the project

The third case study is a project that was carried out in construction of a new library at an academic institution, the project was a multi storey.The contract amount of this project was Tshs. 2,026,538,726.000. The Construction of project commenced on July 2014 and was expected to be completed by May 2015; it was a contract of a total of 44 weeks. The type of contract was East Africa Condition of Contract (E.A.C.C). However, the completion was not done in due time as up to the date when this research was being carried out the works were not completed and there is no construction activities that were carried out so far to date.

The project involved the following prime participants; the client who was also the financier - the ministry of Land, Housing and Human Settlement. Other project members were the design team (consultants), general contractor and approved domestic sub-contractors who dealt with electrical installation, glazing and mechanical installation.

4.4.3.3 Theoretical contextualization of case study three building project

This section presents findings from case study two building project in relation to the Principal agent theory. This analysis has specifically being done in order to describe case study in the light of the perspective of theoretical framework and to show how the case study illustrates the elements of theoretical framework. The elements considered for principal agent theory is hidden characteristics, hidden information

and hidden intentions and how cause adverse selection problem, moral hazard risks and hidden intentions.

The Principal- Agent theory

In this project, the owner referred to as principal was responsible of providing required financial resources for its delivery, accepts the project milestones and project completion. On the other hand, contractor referred to as agent was hired by the owner to perform all the activities required to complete the project.According to the principal-agent theory, the relationship between the two parties also involves self interest of each party whereby the main interest of the owner was completion of the project so that it can start to run intended activities while the interest of the constructor was completion of the project so as to be paid agreed amount.

Moreover, the project owner acted as the principal in relation to both the project owner's project manager and contractor as agents and the contractor acted as the principal in relation to the contractor's project manager. Therefore, there are two principals and three agents involved, where the contractor was both a principal and agent in a project. These made a total of four parties who worked together in case study one project. These participants shared important information in order to meet main project's targets: time, cost, and quality. However, because of self interest, not all parties effectively shared all the information all of the time. Therefore, the following types of information asymmetries apply for acting parties: hidden characteristics, hidden information and hidden intention. The situation in which one of the two cooperation partners is better informed than the other is characterized by asymmetric information. The following types of information asymmetries applied for

acting parties: hidden characteristics, hidden information and hidden intention. Respectively, these three types of information asymmetries generate following risks: adverse selection, moral hazard and hold-up.

Hidden characteristics cause the adverse selection problem before the contract is signed between the parties involved. The adverse selection problem occurs in the early phases of the project. Like in case study one project, this challenge was not observed in case study three project. This might have been caused by the reason that the project owner was having all the information about the contractor before the contractor is hired. Similarly, the project owner was having all the information about the project manager before hiring. The same holds for the contractor and the project manager working on the contractor's behalf.

Hidden information or hidden action causes the moral hazard risk. This occurs after the contract is signed between involved parties. In case study three building project not all required information were shared accordingly all the time. This mostly affected the contractor as he was executing the work once he was in need of detailed drawings for a certain element of the building there were a big delay from consultant team while the contractor was rushing with time that caused moral hazard.

Hidden intentions tend to cause hold-up problems. In case study two, despite financial and materials investment that was made by the owner and contractor but this project did not being completed on time that led to hold- up problems that affected both project owner and contractor. This was caused failure to comply on contract hence there were delaying in payment and provision of basic materials.

4.4.3.4 Analysis of conflicts that occurred in case study three

This part presents an explanation and discussion on conflicts which occur in case study two which is described above. It present the cause of conflict and how it rose and surfaced and how it was handled with regard to strategies and mechanisms employed in its management.

Error and Omission in Project Design

The general designing of this project were done before the commencement of the project. Further design was being conducted during construction phase. The designing activities that were done in construction phase were mainly detailed drawings for the work that were prepared by a designing team. Conflict rise when the contractor was executing the work once need for detailed drawings for a certain element of the building there were a big delay from consultant team while the contractor was rushing with time.

An attempt to resolve this conflict involved discussion between teams involved in project whereby a series of meeting were conducted, most notably is monthly meeting where by the matter were addressed and there was direct discussion with client on the issue so as to accomplish the project on time.

Delay in Payment

Conflict in case study three was also influenced by delaying in payment. Like other construction projects, it was explained that, the framework of payment was clearly stipulated in contract including time and amount of payment that will paid upon completion of the project. It was observed that, conflict in case study three rose due to the reason that the client did not issues payment as agreed on contract regarding

when it was supposed to be issued. Some certificates were delayed being paid after valuation certification by the consultant. Few certificates were paid as per contract requirement and some were late, by being late, this lead to reduction of contractor's cash flow hence project delay and conflicts in case study three.

On solving this there was meeting which was done monthly and the issue of payment was discussed client promise to pay the balance amount as applied by installment.

Delay on Appointing a Nominated Electrical Sub-contractor

Conflict in this was between the main contractor and his client, as the main contractor was already at site and the work was in progress. Some works were not done as per requirement as there was no electrical sub contractor at site. Works such as plaster to ground floor was difficult to start as per program of work because if it could start accordingly the walls could be chased roughly hence increase cost.

On resolving this there was discussion with client on the matter hence sub contractor were appointed for the works.

4.4.4 Cross case analysis

This study collected information from three building projects in Tanzania. The focus of this part is to unveil similarities and differences which were observed in theoretical context of these cases as well as caused factors and strategies adopted in handling conflicts.

4.4.4.1 Theoretical contextualization of the case studies

In all three building projects clients acted as principal and contractors acted as agent. In case study one and three, the project owner acts as the principal in relation to both

the project owner's project manager and contractor as agents, and the contractor acts as the principal in relation to the contractor's project manager. Therefore, there were two principals and three agents involved, where the contractor was both a principal and agent in a project. In case study two, the project owner hired a contractor to perform all the activities required to complete the project. Hence, there were principal who was owner and an agent who was a contractor only due to nature of the contract of project that was done on short term duration.

Hidden characteristics

Hidden characteristics cause the adverse selection problem before the contract is signed between the parties involved. The adverse selection problem occurs in the early phases of the project. This challenge was not observed in case study one project and three as participants were well informed among themselves. However, it was found in case study two whereby the first chosen contractor did not complete the project hence the second contractor was hired who worked up to the completion of project.

Hidden information

Hidden information or hidden action causes the moral hazard risk. This occurred after the contract was signed between involved parties in all three case studies. It mainly occurred as not all information was being shared in an appropriate way because of the self interest of all the parties involved which leads to misunderstanding. Hence there were omission and addition that were done by key participants of the affect the overall progress of all three case studies.

Hidden intentions tend to cause hold-up problems.

All three case studies faced hold up problems as there were delays in completion of all case studies. This affected the contractor, clients and all other participants of projects who invested their time, financial and materials resources with a view of gaining after completion of the project. So this was not done as it was supposed to do as there delaying in completion of the projects that were mainly caused by misunderstanding among participants of the projects.

4.4.4.2 Causes of conflicts in three case studies

Conflicts in all studied building projects were caused by a combination of multiple factors. These factors vary across studied building projects due to the differences on the nature and scope of projects. However, failure to issue payment on agreed time was raised a causative factor in conflicts that occurred in all selected building projects. From this finding it can be established that, conflicts in building projects in Tanzania are fuelled by failure of issuing payment as agreed on contract. On the other, inaccurate valuation caused conflicts in case study one and two.

4.4.4.3 Strategies used in resolving conflicts in three case studies

The study found correspondence in the way of resolving conflicts that existed between contractors and clients of all building projects. These ranged from initial stage of setting projects whereby in all contracts an agreement were made to ensure confidence between the contracting parties. These were done in form of using a third party – consultants / design team to administer the contract between the client and contractor, guarantee or surety bond guaranteeing contractor's performance, intention to resolve any dispute by an arbitrator or adjudicator, liquidated damages

for delays caused by the contractor to complete the project within the agreed time frame and payment of interest on delayed payments to the contractor by the client. On the hand, conflicts that emerged during construction phase were resolved by means of improved communication among conflicting parties through meetings and dialogues whereby smoothing, collaboration, compromising and avoiding approaches were employed.

4.5 Chapter Summary

This chapter has analyzed the collected data from respondents which were building contractors and public clients from public institutions. The analysis was carried out basing on the research objectives which are to identify factors that lead to conflicts between publicclients and contractors in building projects in Tanzania, to determine strategies used to resolve conflicts between publicclients and contractors in building projects in Tanzania and to recommend how conflicts issues between publicclients and contractors in building projects can be prevented and reduced in Tanzania.The summary of what have been presented in this chapter as well as recommendations is presented in the next chapter.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter provides a conclusion and recommendation of the study which specifically sought to examine conflicts issues between public clients and contractors in building projects in Tanzania. It specifically looks into causes and approaches adopted in resolving conflicts that occurred between contractors and clients of public building projects in Tanzania. Based on given conclusion, the chapter brings forth recommendations and an insight on areas for further studies.

5.1 Conclusion

This study aimed at examining conflicts issues that occur among construction stakeholders with a particular focus on conflicts that existed between contractors and public clients in Tanzania. The following are the conclusions drawn based on the objectives of the research:

5.1.1Factors influencing occurrences of conflicts between public clients and contractors in construction projects in Tanzania

The first objective of the study sought to unveil factors that influence occurrences of conflicts that occur between public clients and contractors in construction projects in Tanzania. Basing on the findings obtained in empirical investigation and review of case studies, it can be concluded that conflicts that occurs between public clients and contractors are influenced by multiple factors. Among these factors, improper planning and schedulingis the most causative factorthatigniteseruption of

conflictsbetween public clients and contractors than other factors. Apart from that also, delay in payment, error and omission in project design, inaccurate valuation, failure to adhere on agreed terms, ambiguities in contract document are other factors that influences the occurrence of conflicts between public clients and contractors.

5.1.2Strategies used to resolve conflicts between public clients and contractors in construction projects in Tanzania

From the findings, it can be established that, most contractors and public clients use integrating and compromising approaches than other approaches in resolving conflicts that occurs among them. These ranges from initial stage of setting projects whereby in all contracts an agreement is made to ensure confidence between the contracting parties. This is done in form of using a third party– consultants/ design team to administer the contract between the client and contractor, guarantee or surety bond guaranteeing contractor's performance, intention to resolve any dispute by an arbitrator or adjudicator, liquidated damages for delays caused by the contractor to complete the project within the agreed time frame and payment of interest on delayed payments to the contractor by the client. On the otherhand, conflicts that emerge during construction phase are resolved by means of improved communication among conflicting parties through meetings and dialogues.

5.1.3Measures of preventing and reducing conflicts between contractors and public clients

Basing on the data collected, it is concluded that, most of conflicts that occurs between public clients and contractors can be prevented and reduced by having early negotiations. This method is followed by other methods of preventing and reducing

conflicts between contractors and public clientswhich are communication of potential problems or claims at the earliest opportunity, designing contract conditions that are fair to all parties, adequate contract documentation, choosing the appropriate project delivery method and team building including the introduction of partnering approaches to establish common objectives.

5.2 Recommendationsfor actions and further studies

5.2.1 Recommendations of measures for effective management of conflicts between publicclients and contractors

Basing on findings obtained in this study, the following are recommendations in order to reduce conflicts between contractors and public clients in Tanzania.

i. By considering that improper planning was raised as one the causative reason for conflicts between contractors and public clients in Tanzania, there is need for clients to have accurate planning before embark on actual construction activities. This can be by acquiring as much information as possible by involving competent design teams. This will reduce addition and omission issues that affect the progress of the projects.

ii. Cash inflow on the client's side to finance the project should properly be planned at earlier stage so as to have financial stability during construction of building projects. This will reduce deficiencies in construction and delay in paying agreed amounts of money.

iii. Projects contracts such as PPRA should carefully be arranged and should consider the interests of all participants of the projects and set

clear mechanisms of dealing with various deviances that occur in construction of the projects.

5.2.2 Recommendations for further studies

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

i. Since this study was conducted in Tanzaniaonly, study of the same theme can be conducted in other areas such as in East African countries and beyond so as to have generalized findings regarding cause and strategies used toresolveconflicts that occurs between public clients and contractors.

ii. Another possible approach to future research is to expand this study by involving other participants of the projects. Other study can examine conflicts that occur between contractors and consultants and clients and contractors and other workers so have a wider perspective regarding conflicts in construction industry.

REFERENCES

Amason, A. C., & Schweiger, D. (1997). The effect of conflict on strategic decision making effectiveness and organizational performance. In C. K. W. De Dreu & E. Van de Vliert (Eds.), Using conflict in organizations (pp. 101–115). London: Sage.

Awakul, P. & Ogunlama, S. (2002): The Effect of Attitudinal Differences on Interface Conflicts in Large Scale Construction Projects: A Case Study, *Construction Management andEconomics Journal ,20, 365 – 377.*

Barton, K.M & Martin, D.C (1991*). Information to Change the World*. New York: McGraw- Hill.

Bendersky, C. and Hays, N. (2012). Status conflict in groups. Organization Science, 23(2): 323- 340

Boulding, K. (1964). A Pure Theory of Conflict Management, in Kahn, R and Boulding, E. (eds). Power and Conflicts in Organizations, Travistock Publications Limited, London.

Carnevale, Peter J.; *Probst*, Tahira M. (1998) Social values and social conflict in creative problem solving and categorization. *Journalof Personality and Social Psychology*, Vol.74(5).

Chang, C.Y., and Ive, G. (2007), The Hold-Up Problem in the Management of Construction Projects:A Case Study of the Channel Tunnel, *International Journal of Project Management*, Vol. 25, No. 4,pp. 394-404.

Cheung, C. C. and Chuah, K.B. (1999): Conflict management styles in Hong Kong industries:
International Journal of Project Management Vol.17, No.6, 393 – 399.

Cresswell, J. (2003) *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Thousand Oaks: Sage.

De Dreu, C. K. W., & Weingart, L. R. (2003). Task versus relationship conflict, team effectiveness, and team member satisfaction: A meta-analysis. Journal of Applied Psychology, 88, 741–749. 25

Deutsch M & Coleman P. (2000). *The Handbook of Conflict Resolution*: Theory and Practice. San Francisco: Jessey- Bass.

Fajana, S. (2000). *Industrial relations in Nigeria. Theory and features.* Lagos: Panaf Press Ltd.

Fenn, P & Gameson, R. (1992). Construction ConflictManagement and Resolution. *Proceedings of the First International Construction Management Conference*. The University of Manchester, Institute of Science and Technology (UMIST).

Filley, A. C. (1975). *Interpersonal conflict resolution*. Glenview, IL: Scott Foresman and Company.

Furnham, A. (1997). *The psychology of behaviour at work: the individual in theorganization*. Sussex: Taylor and Francis.

Gall, J.P., Gall, M.D & Borg, W.R (2005). *Applying Educational Research: A Practical Guide.*Allyn & Bacon. Pearson Education.

Gross M A & Guerrero L K (2000), "Managing conflict appropriately and effectively: an application of the competence model to organizational conflict styles.*International Journal of Conflict Management*, London.

Hellriegel, D. & Slocum, J. W. (2006). *Organizational behavior*, 11th edition.Canada: South- Western.

Ivancevich, J.M & Matterson, M. T. (1996). *Organizational Behavior and Management*. (4th ed). Houston: Irwin Inc.

Jackson, S. E., May, K. E., & Whitney, K. (1995). Understanding the dynamics of diversity in decision-making teams. In R. A. Guzzo, E. Salas, & Associates (Eds.),Team effectiveness and decision making in organizations (pp. 204-261). San Francisco, CA: Jossey-Bass.

Jäger, C. (2008), *The Principal-Agent—Theory within the Context of Economic Sciences*, Norderstadt,Herstellung und Verlag, Books on Demand GmbH.

Janssen, O., Van de Vliert, E., & Veenstra, C. (1999). How task and person conflict shape the role of positive interdependence in management teams. Journal of Management, 25, 117- 142.

Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. Administrative Science Quarterly, 40, 256-282.

Jehn, K. A., Northcraft, G., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. Administrative Science Quarterly, 44, 741–763.

Jehn, K. A. (1997). Qualitative analysis of conflict types and dimensions in organizational groups. Administrative Science Quarterly, 42, 530–557.

Jehn, K. A., & Mannix, E. A. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. Academy of Management Journal, 44, 238– 251.

Jehn, K. A., & Bendersky, C. (2003). Intragroup conflict in organizations: A contingency perspective. Research in Organizational Behavior, 25, 189–244.

Jex, S. M. and Britt, T. W. (2008). *Organizational psychology: A scientist practitioner Approach*. New York: John Wiley and Sons Inc.

Jonkman, N (2006). *Management of conflicts by Principals in Selected Soshanguve Secondary Schools*. Department of Education Studies: Tisane University of Technology.

Kezsbom, D., Schilling, D. and Edward, K .(1999). *Dynamic projectmanagement: a practical guide for managers and engineers*. New York: JohnWiley and Sons Inc.

Kombo, D. K., & Tromp, D. L. A. (2006). *Proposal and Thesis Writing*: *An Introduction*. Nairobi: Paulines Publications Africa.

Kroon,J. (1991). *General Management: Planning, Organizing, Activating and Control*. (1st Ed).Pretoria: Haum Tertiary.Belmont. Wadsworth.

Kothari, C.R (2004). *Research Methodology, Methods and Techniques*. New Age International Publications Ltd. New Delhi.

Krishnaswami. O.R (2002). *Methodology of Research in Social Science*. Delhi: Himalaya.

Leung, Yu Fai (2009). Conflict Management and Educational Intelligence. Unpublished Thesis for Degree of Business Administration, Southern Cross University, Lismor.

Loosemore, M. (2000): *Crisis Management in Construction Projects,* ASCE Press, American Association of Civil Engineers, 1801 Alexander Bell Drive Rston, Viginia 20191- 4400.

Lorenz, V. C. (1999). Some treatment approaches for family members who jeopardize the compulsive gambler's recovery. *Journal of Gambling Behavior.* 5,303-312

Marchewka, J.T., (2006) *Information Technology Project Management: Providing Measurable Organizational Value* (2nd ed) United States; John Wiley and Sons Inc

Mayo, E., (1945) *The Social Problems Of An Industrial Civilization*. Boston: Harvard University

McShane, S. L., & Glinow, M. A. (2008).Organizational Behaviour: New York:McGlaw-Hill Companies.

Miles, M., &Huberman,A. (1994). "*QualitativeData Analysis".*London: SAGE Publications.

Mohemad, R., Hamdan, A. R., Othman, E. Z. A., Noor, N. M. M., (2010). Decision Support Systems (DSS) in ConstructionTendering Processes. International Journal of Computer
Science Issues, 7(1), 35-45.

Mlinga, R. S., (2008). Ethics in Public Procurement: A MissingLink in the Education and Training of Construction IndustryPractitioners. Proceedings of Construction Industry Forum,September12-13, Dar es Salaam, Tanzania, 1-19.

Müller, R., and Turner, J.R. (2005), The Impact of Principal-Agent Relationship and Contract Typeon Communication between Project Owner and Manager, *International Journal of ProjectManagement*, Vol. 23, No.5, pp. 398-403.

Natasha, M., W. Cynthia, M. Kathleen, G. Creg & N. Emily. 2005. *Qualitative Research Methods: A Data Collectors Field Guide*. Family Health International.

Ntiyakunze, S.K. (2011). Conflicts in Building Projects in Tanzania: Analysis of Causes and Management Approaches. Doctoral Dissertation, Royal Institute of Technology (KTH).

Okuntade, T. F. (2014). Causes and Effects of Conflict in the Nigerian Construction Industry. *International Journal of Technology Enhancements and Emerging Engineering Research*. 2 (6)

Omisore, B.O &Abiodun, A.R. (2014). Organizational Conflicts: Causes, Effects and Remedies. *International Journal of Academic Research in Economics and Management Science* . Vol. 3, No. 6 ISSN: 2226-3624.

Panneerselvam, R. (2007). *Research Methodology*. New Delhi: Prentice-hall of India.

Pinkley, R.L.1990. Dimensions of conflict frame: Disputant interpretations of conflict. Journal of Applied Psychology, 75: 117-126.

Pondy, L. R. (1967). Organizational conflict: concepts and models. *AdministrativeScience Quarterly* 12(2), 296-320.

Rahim, M.A., (2011) *Managing Conflict In Organizations* (3rd ed) Westport. Quorum Books..

Robbins, S. (2005). Organizational Behavior: New Jersey: Prentice Hall.

Robbins, S.P, et al, (2003). Management Forest NSW: Pearson Education, Pp 385-421.

Saunders, M., Lewis, P. and Thornhill, A. (2007). Research Methods for Business Students. Harlow: Pearson Education

Schermerhorn, J. R. (2010). *Exploring management.* New York: John Wiley andSons Inc.

Schieg, M. (2008), Strategies for Avoiding Asymmetric Information in Construction Project Management, *Journal of Business Economics and Management*, Vol. 9, No. 1, pp. 47-51.

Simmons, T.L. and Peterson, R.S. (2000): Task Conflict and Relationship Conflict in Top Management Teams: The Pivotal Role of Intragroup Trust, *Journal of Applied Psychology,Vol.85, No.1, 102 – 111.*

Steen, R. H (1994). "Five Steps to Resolving Construction Disputes- Without Litigation." *Journal of Management in Engineering*. 4 (12)

Sverlinger, P-O. (2000). "*Managing knowledge inprofessional service organizations*" A doctoral thesis, Department of Service Management, Chalmers University of Technology, Gothenburg, Sweden.

Swart, M. (2001). *Advanced Communication Skills*. Pretoria Haum.

Tan, A.L., (2005). "*Successful Project Management in Malaysia"* Malaysia: Asia Pacific Media, Publication Sdn. Bhd.

Tashakorri, A. and Teddlie, C. (1998) *Handbook of Mixed Methods in Social and Behavioural Research*. Thousand Oaks: Sage.

Tjosvold, D. (1991). *The Conflict-Positive Organization: Stimulate Diversity and Create Unity*. US: Addison-Wesley Publishing Company, Inc.

Trochim, W; Donelly, J. (2006). Research Methods knowledge base. Cengage: Learning Publishers.

Vaaland, T.I. (2004): Improving project collaboration: start with the conflicts: *International*

Journal of Project Management, Vol. 22, Issue 6, 447 – 454.

Vaaland, T.I. and Häkansson, H. (2003): Exploring inter-organisational conflict in complex

projects: *Industrial Marketing Management, Vol. 32, Issue 2, 127 – 138.*

Van der Westuizen, P. (1991). *Effective Educational Management*. (3rd Ed). Pretoria: Haum.

Verma, V. K. (1996). *The human aspects of project management vol. two: humanresource skills for the project manager*. USA: PMI Publishing Department.

Wall, J.A., Callister, R. R. (1995). Conflict and its management. *Journal ofManagement* 21(3), 515-558.

Walliman, N. (2005) "*Your Research Project, A step by step guide for first time researcher"*. 2nd edition Sage Publications London.

World Health Organization, (2004). *Global Status Report on Alcohol*. Department of mental health and substance abuse. Geneva shelter: United Nation Publication.

Yale, D.J. & Hardcastle, C. (2003): *The causes of conflicts and Disputes in the Hong Kong Construction Industry – A Transactional Cost Economics Perspective*, Research Papers, Vol.4, No.22, RICS Foundation.

Yin, R.K (2003). *Case Study Research: Design and Methods* (3rd ed). Thousand Oaks, CA: Sage Publications

APPENDICES

APPENDIX A

QUESTIONNAIRES FOR PUBLIC CLIENTS AND CONTRACTORS OF BUILDING PROJETS

PROJECT TOPIC: AN EXAMINATION OF CAUSES AND MANAGEMENT STRATEGIES OF CRITICAL CONFLICTS BETWEEN PUBLIC AND CONTRACTORS IN TANZANIA

INTRODUCTION

In accomplishment of building projects it is difficult for project stakeholders particularly clients and contractors to develop a mutual understanding about the project (product) before embarking on it and it is at these interfaces that misunderstandings and conflicts probably can occur. Conflict refers to perceived or experienced incompatible differences within the individual or between two or more individuals, which may lead to some or other forms of opposition. Conflicts, to some differing degrees, occur daily in everyone's life.

Please respond to the following by either writing in the blank space provided or ticking the appropriate box.

SECTION ONE - RESPONDENT PROFILE AND AWARENESS ON CONFLICTS

1.1 What type of organization do you belong?

a) Clients' organization [ ]
b) Contracting firm [ ]
c) Consulting firm [ ]
d) Others (specify).....

1.2 Which of the following describes your position?

a) Quantity Surveyor [ ]
b) Project Manager [ ]
c) Architect [ ]
d) Principal consultant [ ]
e) Contractor [ ]

1.3 How many years of experience do you have in the construction industry?

a) Less than 5years [ ]
b) 5 years to 10year [ ]
c) 10 years to15 years [ ]
d) 16 years and above[ ]

1.4 If you are a client have you ever had conflicts with contractors? Or if you are a contractor have you ever had conflicts with clients of building projects?

a) Yes[ ]
b) Not sure[ ]
c) No[ ]

1.5 If "yes" what is the extent of occurrences of conflicts?

a) Always[ ]
b) Moderate[ ]
c) Rarely[ ]

1.6 If you are a client, does conflicts that occurs between you and contractors play positive role (constructive) in completion of building projects? or If you are a contractor, does conflicts that occurs between you and clients play positive role (constructive) in completion of building projects?

a) Yes [ ]
b) No[ ]

1.7 If you are a client, do conflicts that occur between you and contractors suppress development and completion of building projects?or if you are a contractor, does conflicts that occurs between you and clients suppress development and completion of building projects?

a) Yes [ ]

b) No[ ]

SECTION TWO – QUESTIONS RELATED TO POTENTIAL CAUSES OF CONFLCITS BETWEEN CLIENTS AND CONTRACTORS IN BUILDING PROJECTS

2**.** Using a scale of "Strongly Agree", "Agree", "Disagree", and "Strongly Disagree" please indicate by a tick [√] the degree of your agreement with the following potential factors that cause conflicts between clients and contractors.

No.	Potential causes of conflicts between clients and contractors	5	4	3	2	1
1.	Changes or modifications of scope that increase consequential costs beyond initial cost					
2.	Contractor's failure to read the contract documents					
3.	Unrealistic claims for variations of works by contractors					
4.	Failure of the client to honour payments as and when due					
5.	Poor financial arrangements by the clients leading to late payments					
9.	Non - availability of specified materials					
10.	Clients design vision not communicated effectively to the design team					
11	Contractors' failure to price properly for the works					
12	Lack of understanding and agreement on the type of contract between the client and the contractor					
13	Unclear and incomplete description of items in the bills of quantities					
14	Design professional's failure to remain within the clients project budget and design objectives					
15	Rigid budgets control by the client.					
16	The absence of team spirit among members of the project team					
17	Over design and under estimating the cost involved					
18	Acceleration of works requested by client that affected schedule					
19	Site conditions which differ materially from those described in the contract documents(especially unforeseen underground conditions)					
20	Improper determination of the employment of the contractor					

	under the contract					
21	Lack of clarity regarding the time from which contractor can calculate interests on late payments					
22	Contractors failure to plan adequately and to follow planned schedules					
23	Contractors failure to coordinate subcontractors' work					
24	Disruptions or delays to the works caused by client					
25	Contractors fundamental misunderstanding of what is allowable under the terms of the contract					
26	Clients expectations at variance with contract documentation					
27	Non-responses to questions or resolutions of problems presented by one party in the contract to another party in the contract					
28	Incomplete or inaccurate responses to problems presented by one party in the contract to another party in the contract					
29	Poor records keeping by client and contractor and consultant					
30	Inexperience on the part of the consultant					
31	Under invoicing and Over invoicing by contractors					
32	Award of contracts to incapable contractors					
33	Inadequate site management					
34	Untimely issue of variations instructions					
35	Conflicting instructions					
36	Unconfirmed oral instructions					
37	Late information delivery					
38	Cumbersome procedure for requesting information					
39	Unclear lines of communication					
40	Late payments to subcontractors and suppliers					
41	Discrepancies /ambiguities in the contract documents					
42	Poor and unfair allocation of project risk					
43	Delays in the supply of working drawings					
44	The parties failing to identify and deal with issues on time					
45	Inadequate descriptions of the Preliminary Items in the Bills of Quantities					
46	Over measurement or under measurement of works by consultants to work in progress					
47	One party taking entrenched position during contract negotiating					

48	Failure to choose the appropriate procurement method					
49	Disruptions and delays by the contractor that create deviation from initial programme of works					
50	Ineffective communication between the parties on the project					
51	Application of Liquidated Ascertained Damages (LAD)					
52	Unfair grant of extension of time					
53	Poor interpretation of specifications					
54	Failure to use specified materials, skilled operatives and recognised methods					
55	Inaccurate valuation of variations and works in progress					
56	Over measurement or under measurement of works by consultants to work in progress					
57	One party taking entrenched position during contract negotiating					
58	Failure to choose the appropriate procurement method					

SECTION THREE - QUESTIONS RELATING TO THE MANAGEMENT OF CONFLCITS BETWEEN CLIENTS AND CONTRACTORS IN BUILDING PROJECTS

3. To what extent you have been applying the following methods in resolving conflicts clients and contractors?

Perceived mechanism of resolving conflicts	**Response**				
	5	**4**	**3**	**2**	**1**
Withdrawing (Avoiding)- I avoid, deny, give up, pull out, refuse to deal with the conflicts with contractors by ignoring it as much as possible					
Smoothing (Obliging)- I give up to a contractor's/ clients concern and ignore my own interest					
Forcing (Dominating)- I use power that I have in order to resolve conflicts with contractors/clients					
Compromising - I attempt to resolve a conflict by					

identifying a solution that is partially satisfactory to my side and that of contractors/clients					
Integrating - I thoroughly discuss with contractors/clients whenever conflict occur and finding solution that is constructive to both of us)					
I don't use any of these method					

SECTION FOUR - QUESTIONS RELATING TO SUGESTION OF WAYS OF MIMIMIZING AND HANDLING OF POTENTIAL CAUSES OF CONFLICTS BETWEEN CLIENTS AND CONTRACTORS

4. The tablebelow comprises of a number of ways in which potential causes of conflicts between public clients and contractors can be prevented. From your experience as a contractor, please tick the appropriate response in a box by indicating how important each method is in preventing conflicts in building projects.

Relative importance: 1 – Not important, 2 – Quite/low important, 3–Moderately Important, 4 –Important, 5 - Very important

	Methods of preventing conflicts in building projects	**Relative Importance**				
		1	**2**	**3**	**4**	**5**
1	Early negotiations					
2	Adequate contract documentation					
3	Designing contract conditions that are fair to all parties(allocating projects risks fairly to all parties)					
4	Team building including the introduction of partnering approaches to establish common objectives					
5	Communication of potential problems or claims at the earliest opportunity					
6	Choosing the appropriate project delivery method (procurement system)					
7	Anticipating and recognizing the enhanced					

	potential for conflicts and preparing to address them					
	Please suggest other ways of preventing conflicts between public clients and contractors of building projects that have not been indicated above and rank them accordingly.					

APPENDIX B

Case study protocol

General area investigated	Specific area investigated	Source of evidence
Description of the project	• Location • Purpose of the project • Participants of the project • Duration of the project • Nature and amount of the contract	• Interview • Document review
Causes of conflicts between contractor and client	• Improper planning and scheduling • Error and omission in project design • Inaccurate valuation • Late issue of payment • Failure to adhere on agreed terms • Ambiguities in contract document • Ineffective communication	• Interview • Document review
Strategies used in managing conflicts	• Avoiding • Obliging • Forcing • Compromising • Integrating	• Interview • Document review