

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**COLLEGE OF ARTS AND BUILT ENVIRONMENT**

**MANAGING CONFLICTS IN CONSTRUCTION OF PUBLIC PROJECTS IN  
GHANA:**

***(A CASE STUDY OF SELECTED BUILDING PROJECT IN ASHANTI REGION)***

**BY**

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**A thesis submitted to the department of Building Technology, College of Arts and  
Built Environment in partial fulfillment of the requirement for the degree of  
MASTER OF SCIENCE.**

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## DECLARATION

I Kingsley Emmanuel Hagan, do hereby declare that this submission is my own work towards Masters of Science in Construction Management (MSc. Construction Management) and that to the best of my Knowledge, it contains no material previously published by another person nor materials which have been accepted for the award of any degree in any University except where due acknowledgement has been made.

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## DEDICATION

To Ewurama Hagan my wife, Nana Yaa Konama-Hagan, Kofi Agyare-Hagan, Kwadwo Gyapong-Hagan the very gifts in my life that causes me to dream and a very special mother Anita Alice Boateng, who caused it all!



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First to my maker and giver of life, without his manifold grace this journey would have been absolutely impossible.

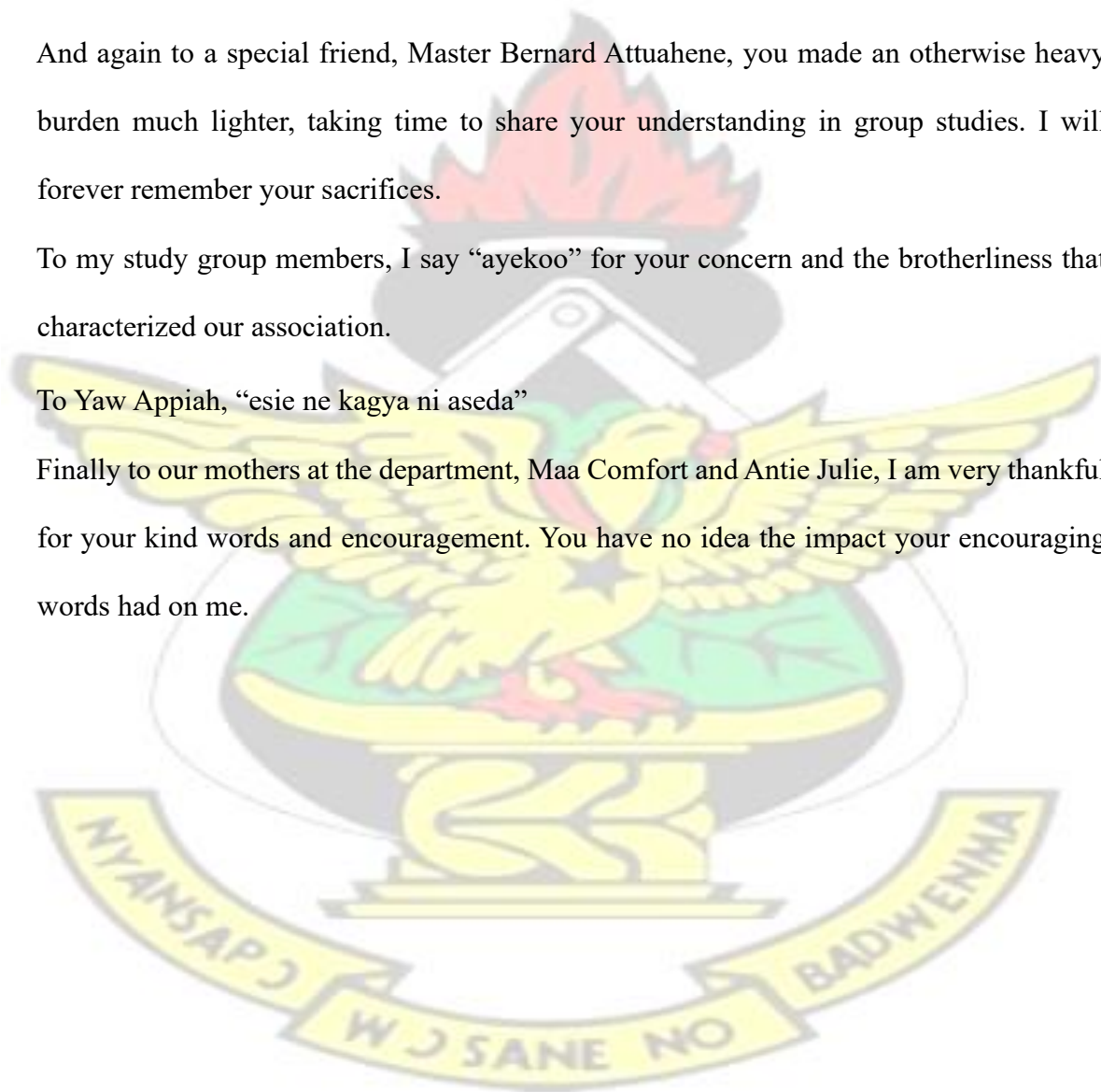
I am exceedingly grateful to all my lecturers who took turns to pour out their world of knowledge and experience to contribute to who I am today.

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To Yaw Appiah, “esie ne kagya ni aseda”

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## ABSTRACT

Building projects universally demand the contributions of several individuals involving the constructing team, the supervising team, and the client, with each person bringing to the fore their specialist knowledge required to successfully bring the project to completion. And all these individuals coming together for the purpose of bringing the project to fruition have different interest but a common objective of project execution. And when people of varying background come together as in the case of a project team, conflict is certainly not absent. As the members within the project coalition interrelate interest collides and conflicts result, which can have adverse effects on the project delivery, especially when it is not well managed. The research therefore sought to find the causes of these conflicts in the construction sector and the manner by which these conflicts are resolved. The research did use quantitative design in combination with a cross-sectional survey on construction firms that had registered with the assemblies of Kumasi, Asokore-Mampong and Ejisu-Juabeng. And using questionnaires, a total of 160 questionnaires were distributed but 152 were received and analyzed through the use of the Microsoft Excel and Statistical Package for Social Scientists (SPSS). General causes of conflict according to the results predominantly create conflicts than the contract-related causes. Inadequate communication and contradicting instructions according to the results are the leading causes of conflict. The effects of conflict on project success per the



findings include project delays, stays and ineffective construction and reduced productivity at site. The findings revealed, participants in the study prefer the use of collaborating and compromising styles in solving conflict on sites. Every project start and ends with communication, therefore communication is the life wire of all construction projects. And to cure the communication problem, the study suggests strategies like Team Meeting Discussions, Site Review Meetings, and Project Status Reporting platform.



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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background to the Study

Building projects universally according to Shapiro (2005) are undertaken by key participants; contractors, designers, and owners. And depending on the size and complexity of the project a team may evolve that may comprise the client/financier, general contractors, suppliers, and consultants (architects, engineers, quantity surveyor, and health & safety specialist). And as the project proceeds these individual and institutions, and their personnel interact and interrelate, forming a mini-society or what Murray et. al. (1999) cited in Femi (2014) referred to as a temporary project coalition, with a common goal of bring into being a project. This society as formed by the key project participants further relate with the larger society that comprise public authorities, public institutions, the Local Government representatives (at the metropolitan assemblies, municipal assemblies and the district assemblies), and the different townships in which these projects are sited or located. Fenn et al., (1997) asserts that an excellent control of communication, time and other resources by a well-coordinated and collaborative key members of the project team will result in a successful project completion.

But Gale (1994) admit that exchanges within the construction teams have been described as argumentative, conflict and crisis ridden, and as a result individual workers in the industry are exposed to extreme hostility. These conflicts according to Harmon (2003) results from disagreements about ways of solving on the spot site-related problem, insufficient planning, ill-prepared contract documents, and the want of coordination between the contracting parties. As these exchanges transpire on a building project, members form a community with an intricate set of intertwined relationships. Harmon (ibid) continues that conflicts



emanating from such disagreement can ruin a project and result in thorny litigation, amplified cost and a collapse in communication. Agreeing Verma (1998) points to breakdown in communication as the most common, the most evident and the overarching cause of conflict.

According to Lee (2011) in Femi (2014) conflict is “as indispensable as peace, since the only reason for seeking peace is because there exist conflict, which is inevitable in the construction industry as in any other human endeavor.” Femi (2014) concludes that conflict is an inborn element of social human relations and steps should be taken to ensure the conflicts do not degenerate into dysfunctional conflict. In the mind of Borvan (2011) cited in Femi (2014) there exist no project that can overwhelmingly be protected from conflict, such conflicts may result in financial damage.

Therefore, the success of most public projects is contingent on how these inevitable conflicts are managed and resolved. The study therefore seeks to identify the kinds of conflict that occurs in the construction of public buildings, how the projects are affected by these conflicts and how they are managed by the project participants in Ghana.

## **1.2 Statement of the Problem**

According to Harmon (2003) a well-organized project is a project which has been properly designed, appropriately planned, and accordingly built to specification, cost and within the scheduled time. Most projects particularly in the public sector rarely get completed in time, within the budgeted cost and the quality as expected (Femi, 2014). In affirming Femi (2014) states that construction conflicts are not so common in private and internationally funded projects distinct from public projects where politics is often involve in the award of the contract. Public building projects like any other project demand the work of numerous personnel from the labourer through to the foremen, from the superintendent to the site



engineer, the project manager, the architect, the client and their representatives and institutional inspectors and regulators each having a particular job to perform. And for a project to be delivered successfully, all these individuals must work and resonate together in cooperation and collaboration, in respect to schedule time, the use of resources and the stated budget. Regrettably, these individuals with varying education and skills deployed at various stages of the project have differing understanding of project delivery making disagreements and conflicts unavoidable (Ankrah and Langford, 2005).

This therefore makes the construction of public buildings a notorious area for conflicts; where contractors bring claims against owners, designers fend off blame for faults and omissions, builders or contractors are confronted with on-site challenge which hitherto had not been captured by the designers, and neighbours and residents raises red flags in protest to the project. Resolving the complex nexus of conflict between project participants, and a good management of these conflicts according to Hellard (1988) is a preventative medicine for dispute. Conflict management in the construction industry has been highly technical, exceptionally complex, systematically driven, and legally controlled and this continued to create rescindment of contract, incomplete projects and project abandonment (Shapiro, 2005). Nonetheless, participants on various construction projects have fused some basic conflict resolving tactics which are not readily evident in handling conflict. And as such a number of begging questions comes to mind; question like “what brings about conflict?”, “And can these conflicts be resolved?” and if yes” in what way are they decided?” Is it through a Win-Win strategy, a Win-Lose strategy, or a Lose-Lose strategy?

It is significant therefore to seek answers by way of research into this area of conflict.

### **1.3 Aim and Objectives of the Study**

The purpose of this study is to discover methods for deciding or handling conflict in construction of public building projects in Ashanti Region.

And to find solutions to the overall objective, the research endeavour to;

- i. Find causes of conflicts in the construction of building projects within Ashanti Region.
- ii. Identify the effects of conflict on construction project in Ashanti Region.
- iii. Assess conflict management methods used in resolving conflict in construction projects in Ashanti Region and the accompanying effects on project feat.

### **1.4 Research questions**

The following research questions formed the basis of the study:

- i. What are the sources of conflict in public building project in Ashanti Region?
- ii. What are the effects of conflict on construction projects in Ashanti Region?
- iii. What management approaches are used in resolving conflict in public building projects and their effects on project success?

### **1.5 Justification of the study**

Players in the construction industry have fused rudimentary conflict management expertise within most job-related expertise for handling conflict which may ensue during work. The conflict handling methods however unassuming are emphatically impacting business relations of which the building construction sector cannot be excused. This study is projected to add importantly to existing knowledge on conflict-related issues, primarily within the building sector. Experts and industry players including researchers in the Building Sector

may rely on the findings of this research as reference point for advance studies and to consequently help enlighten participants in the construction sector on conflict-related matters which are likely to occur and how to handle them within the industry.

The study moreover unearth or exposes causes of conflict to guide policy makers in tackling such factors that predispose construction teams to conflict and the one that causes or may cause conflict in the foreseeable future in construction of projects in the Ashanti Region and Ghana at large. Participants in the construction industry especially project managers and managing contractors may use the findings in the study as a guide in enhancing the positive aspects of conflict and lessening the negative impact of conflict on construction of public buildings.

The research put forward a number of conflict management methods used in the construction sector for the purpose of informing the public especially those in the built environment. Likewise others in a similar industry may use the methods in handling conflict or disagreements that might take place in their respective firms.

The information thus contained in the study may equally be used as a bases for developing a Charter or a Framework for controlling conflicts in the construction of public buildings and other public-related works by the State.

And to sum up, a study of such breadth may be used as a reference point or material for advance research in conflict management not only in construction but other team-related areas of work or fields.

## **1.6 Methodology**

A method of research may be qualitative or quantitative and can also be the combination of the two (qualitative and quantitative) called the mixed method. All three methods have their uniqueness in respect of approach, which differentiate one from the other. The study will thus combine both qualitative and quantitative methods in collecting data. The review of literature will be the subordinate or secondary way of collecting data and information for the study. Materials to rely on for the review will mostly include conference papers, articles from construction and social science journals, books on conflict management and organizational behavior, and numerous professional web sites.

And as with basic or primary data or information, surveys, observations and interviews will be employed. Data previously gathered on construction conflict will also be consulted to shore up the primary data that will be collected. Key participants who will be purposively selected for the study will include construction inspectors, contractors, suppliers, sub-contractors, quantity surveyors, project managers, clients, architect and consultants.

## **1.7 Scope of Study**

Project related conflicts i.e., conflicts which occurs or ensues between team members or players during construction of the project shall be the focus of this study. The team members may comprise the client or promoter, the consultant, the contractor, suppliers and the user (usually the public). And the groupings as listed above may be referred to as blocs to which there are sub-blocs. And therefore any conflict that may ensue tangential to the project or unrelated to the project will not be the focus of this study. This includes interpersonal conflicts which are not project induced. There are a lot more construction of public buildings going on in several parts of Ghana, and the study therefore focuses on selected projects currently under construction in the Ashanti region. Ashanti as a study area was particularly



chosen because of central location and as the second most urbanized region in the country after Greater Accra (87.7%) according to the year 2000 population census. The region contains twenty-one (21) district assemblies, eight (8) municipal assembly and one (1) metropolitan assembly, making the region again the second largest economy in the country ([www.ghanadistricts.com](http://www.ghanadistricts.com)). This by far makes the region which is so steep in tradition, highly influenced by a King, Paramount chiefs and many other stakeholders invariably a pot of disagreement and conflict.

### **1.8 Organization of the study**

This study covers five sections or chapters. The first section or chapter will consist of the study's background, problem statement, the study objectives, research questions, research justification, and methodology of the study, the scope of the study, the study's limitation and the thesis structure.

The second section or chapter appraises existing knowledge on several concepts in addition to conflict models, source of conflict, forms of conflicts that comes with construction projects and the way they are handled. The section or chapter offers a general summary of the building sector highlighting the project group.

The third section or chapter contains the discussion of the study's methodology and defines the design of the study, the sample and population, including data gathering techniques and tools. Type of examination or analysis that will be done will be discussed in this section.

The fourth section or chapter will present a first-hand statistics results and dialogue of the examination executed. Selected building projects for the study and their findings will be presented relative to the set objectives of the research as specified in the first section or chapter. The fifth section or chapter contains the conclusion in addition to recommendations.



This section summarizes the main findings or key results and put forward conclusions from the findings. The chapter also surmises recommendations to improve conflict management skills of project managers, management contractors and others in the construction sector.

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## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

The construction sector consist of various participants and experts that do interrelate to the end of a project. And when these members of the project team interacts during the cause of course of their work, there are potential for conflict and conflict situations do arise. One of the key factors that portends danger or threatens construction of public projects is conflict between project team members or participants (Gardiner et. al., 1993; Fenne et. al., 1997; Emit, 2013). This is mainly as a result of their diverse background, training, skills, norms to work and member's perspective (Duestch, 1973) cited in Mba (2013). Conflict remains a challenge in the construction industry (Kassab et. al., 2010) till today.

This particular chapter or section appraises existing writings on the meaning of conflict, conflict types, conflict management styles or approaches & models in the construction sector. The section terminates with the research's conceptual framework.

#### 2.2 Concept of Conflict

When individuals converge in blocs or groups conflicts are unavoidable (Fenn et. al., 1997). In an effort to safeguard teamwork among team participants, there are often variances of view with respect to the ideal manner of accomplishing the group's shared objectives. Individuals within the group pursue their personal concerns and impede outside sways, dreading discordance in view of these contradictory positions. Often conflict is seen as disquieting, and may deteriorate or decline into a mishap or tragedy. Such intensifying situation would involve people, additional time, and higher costs (Harmon,

2003 cited in Peansupap et. al., 2013). Therefore it is more often than not shunned and stifled. On the other hand when the conflicts are properly fared, they engenders hale and hearty interactions that permit singular novelty and efficiency (Uline et al., 2003).

### **2.2.1 Meaning of Conflict**

Conflicts as found in the construction industry or sector is defined as non-conformance with the procedures or techniques, or a situation in which two or more people seem to be at variance and incompatible on objectives, goals, and priorities (Gardiner and Simmons, 1992). In backing Lee (2008) avows that social relations in establishments are jam-packed with opposing principles or ideals and conditions which results in tension. Accordingly, struggle or disagreements ensues when a number of individuals working in a group appear to be at variance or discordant. According to Price and Chahal (2006) the basic three assumptions of conflicts concept exist, that is, living in opposition instead of agreement, a basic social feature; structural inequities in influence and recompense, are key features of societal arrangements; and ground-breaking transformation, regularly resulting conflict from opposing concerns instead of acclimatization.

Writer after writer have given conflict different meaning; each description or definition hinge on the writer's viewpoint and opinion on conflict or disagreements. Conflicts as spelt out by Wall and Callister (1995) is "when one individual observes that his or her welfare or interest is being resisted or adversely affected by a different individual or group". It has also been perceive as disagreement and opposition between people about something relating to individual's interest, beliefs, ideas, goals and needs (Hellard, 1988; cited in Tashi et. al., 2013). Other writers define conflict as a shared process revealed in discordancy, incongruity or dissension among social bodies or persons (Rahim, 1992). And per Atreyi et al. (2007) conflicts are "differences between group participants that stands in an opposing sides of

goals or interests”. As contained in existing writings, a shared description of conflict is articulated as a tussle among a minimum two interdependent members who observe separate objectives, limited funds and payments, in addition to possible intrusion coming as of the other participants in achieving their set objectives. (Baron, 1997; Hocker and Wilmot, 1985).

A more famous meaning of conflict regular with the building sector is per Rahim (1986), who defines conflicts “as an irreconcilable shared process at tacit and obvious stage where opposing concerns, groups and organizations in the building processes, overindulges the verge of concentration”. Owing to rigorous interface between the participants, conflict controlling or handling is a significant aspect in regard to the whole project managing procedures (Lu and Leung, 2001).

According to Rahim (1986) conflicts may ensue among individuals, teams, organizations, and even states. Conflicts are an in-house opposition (Chong, 2011) that happens amongst task members, attributable to skewed goals, collapse communication and incorrect placement of participants in positions, for being the chief predominant roots of conflicts in the building sector.

Ng et. al., (2007) also concluded that conflicts could arise from organisational issues of structure, people or process and also from uncertainty that could be either internal or external. In commerce, conflicts are progressively conspicuous in groups as the essential component of work. Although teams profit for conjoining their shared wealth, the coreliance nature unquestionably generates conflict (Green, Leslie and Marks, 2001). Yiu and Choung (2006) equally agreed and clarified that some issues increase tension and predispose to conflict in projects. According to Mba (2013) the term conflict conveys to our understanding an appearance for instance resentment, tussles amongst participants, resistance practices and threats to cooperation, but not all conflicts come in these forms especially in the construction



industry, “they come in a form of need to be met or desires to be satisfied, disagreement to be settled and ideas to be shared that eventually leads to change of attitude, feelings and perception”. Femi (2014) agrees that managing a project without any form of misunderstanding, ill-feeling and crisis is almost impossible because misunderstanding is natural to human being in every sphere of life. Rosenhead (2006) equally contends that the “root of “complexity theory” is that a conflict-free atmosphere is unobtainable and as well unappealing. Consequently, rather than organisations demanding a position of steady balance (that is, conflict-free), it ought to reasonably purpose itself in a position of hemmed in volatility” (that is, in tension). Jarvenpaa et al. (2004) postulate that, team goals ought to be comprehended and communal to the different groups irrespective of their miscellany. The study therefore focuses on team conflict that occurs or happens during the building of public structures. The succeeding discourses offers the kinds of conflicts that occurs in the construction of buildings.

### **2.2.2 Conflict Types:**

Mba (2013) observed that there are two sides to conflicts, one is destructive and unhealthy, and the other has a problem solving base where those involved are willing to sublimate personality differences, to listen to other’s views and to be open as well as candid to each other, and to be supportive and helpful whereas the former defeats cooperation. Gorse (2003) equally postulate that conflict can be natural, functional and constructive or unnatural, dysfunctional, destructive, and unproductive. Functional conflict (Gorse, 2003) results from challenges, disagreements and arguments relating to task, roles, processes and functions, this type of conflict often involve detailed discussions of relevant issues. The categorization of conflict by a plethora of literature has been offered semantically diverse by individual writers though, their meaning and description are compatible and convergent.



Conflict (Atreyi et al., 2007) can be issue base or interpersonal; affective and cognitive conflict (Uline et al., 2003); functional or dysfunctional (Rahim, 1992).

Smith (1992) held that functional conflict is fundamentally a construction community problem, when it is an inescapable consequence of the relationship in construction industry whereas dysfunctional conflict may have arisen if the actions of the parties have gone beyond what is recognized as functional conflict. Functional conflict is assumed to be positive (Gould et. al., 1999) and productive whilst dysfunctional can slow down the progress and withhold success. According to Atreyi et al. (2007) issue based conflict can be attributed to task and explicate that it happens as variances in views allied to the group's duty. They describe subject centered conflict as usually conspicuous with intense arguments and individual excitement, bereft of upset and adverse sentiments similar to relational conflict. An interpersonal conflict conversely, is defined as relational centered and are categorized by agitation, aggravation and infuriation amongst group participants (Atreyi et al., 2007).

A sizeable volume of Literature contends that subject-based conflict is useful and advantageous to group achievement; it permits for a crucial evaluation of other options and expand the answerability of team participants. Per Atreyi et al., (2005) the nonexistence of subject-based conflict may precede to an adverse outcome for instance groupthink. Task based or Issue-based conflict has repeatedly been referred to as productive conflict, for the reason that it aids escape dominance and lack of progress, pursues answers for queries, and stimulates inventive thinking (Carte and Chidambarum, 2004). Emmitt and Gorse(2003) in agreement with above position affirms that functional conflict more often than not is beneficial, helping to expose problems, reduce risks, integrate ideas, produce a range of solutions, develop understanding, evaluate alternative and improve solution. And Darling and Walker (2001) insist that conflict which supports the objectives of the team and encourages team achievement is categorized as useful conflict or disagreement. Constructive

conflict desires unbiased dialogue of divergent views or positions. And with the purpose of safeguard and an advantage from differing views, a team forerunner is anticipated to uphold reciprocal respect even though disagreeing (Tjosvold, 1997).

Contrariwise, relational disagreement includes shared abhorrence and persona clanks. It is understood as characteristically harmful to group achievement (Atreyi, Bernard et al. 2007). Conflicts which are difficult to discover the reason or the rationale behind are mostly unnatural conflict or dysfunctional conflict. Dysfunctional conflict according to (Gorse, 2003) occurs when one participant enter into an encounter with the sole aim of destructing and disabling the other. Personal insults, criticism that boost self-ego and comments that lacked regard for others feelings are often described as dysfunctional. Carte and Chidambarum (2004) also referred to interpersonal conflict as “destructive conflict; affective (Uline et al., 2003); As an affective or socio-emotive it consist of a alleged peril to one’s individual or team character, standards, and ideals; it happens in the method of persona clanks, resistance, and thwarting” (Jehn, 1997). Jehn (ibid) insist that relational conflict in total situations capitalize on personality clanks and lessens shared knowledge crucial for work accomplishment.

Affective or Emotional conflict may end in unproductive, inferior judgement quality and approval (Amason and Schweiger, 1997).

Based on the above debate, it may be understood that conflict may normally be labelled as helpful or harmful. With respects to adverse conflict, Hocker and Wilmot (1985) study produced answers like ruin, resentment, disparity, anger, hostilities, apprehension, strain, isolation, viciousness, rivalry, peril, despondency, agony, and desperateness. Unswerving with these portrayals is Simons (1972) assertion that conflict is unwanted and of necessity should be shunned. Deetz and Stevenson (1986) conversely illustrate helpful conflict as

accepted, worthy, essential and factual variances. They highlight on the controlling of conflict and never the conflict per se. Teams can undergo the two types of conflict within a group or working atmosphere, however the way it is handled or fared makes the difference.

Nonetheless, some researchers have dissimilar opinion to the grouping of conflict clarified in relative to building construction. Again they contest that conflict in the building sector ought not merely be termed as dysfunctional or functional (Leung et al., 2005). Somewhat they are with the view that rational stages of conflict may advance contentment in a work environs up until a stage where conflict worsen and reduces satisfaction (Gardener and Simmons, 1995). Tjosvold (2006) argues in his opinion, that conflict may offer incentive for employing intra-group disagreements; an expert regulatory of these in-house conflicts, notwithstanding the transient distraction, strengthens relations between group participants. Sportsman and Hemilton (2007) explained conflict as a positive driver for social change or positive response to change. In support Dahrendof (2007) postulates that conflict is the driving force for man's progress.

### **2.2.3 Functional Conflict Outcomes.**

As previously recognized, task-based or constructive conflict is functional; it has helpful influence on the firm or the working team. Tremendous effects exist in literature that are associated with functional conflict.

Task-conflict or functional conflict tolerates beliefs, ideas, and conventions to be tested (Bagshaw, 1998); following an eagerness to admit new strategies, innovation, straightforward and openness of opinions, and information exchange (Menon et al., 1996). First-class planned verdicts (Amason and Schweiger, 1997), may be attained, after a group's varied abilities, capabilities and viewpoints can be acknowledged, appraised and pooled into



a decision. Consequently, perceptive variety in a team allows procedures that may tie together that capacity, which is an influential factor aimed at a decision-making group. They settle that positive conflict has the propensity to advance the efficiency of team practices and the superiority of preferences and their application.

Furthermore, functional conflicts may lead to the best possible solution to the problems under discussion and become an opportunity for organisational learning, creativity and fulfilment of organisational and individual potential (Hughes, 1994).

Agreeing Higgerson (1996), adds that desirable conflicts also known as positive or helpful conflicts advance trouble-solving, explain concerns or hopes, upsurge member participation and obligation, plus result in superior choice or result. She adds that modification that results in improvement frequently emanates out of conflict, since members lean towards identical views on almost all the issues.

Unlike functional conflict, dysfunctional conflict is likely to have negative consequence on an organisation. Affective or socio-emotive conflict also known as dysfunctional conflicts is seen as vicious and harmful in nature. Maltz and Kohli (2000) cites an example of interdepartmental conflict that can negatively affect the creativity of another department.

Dysfunctional conflict have a tendency to be vicious or intense and prevent parties or groups from achieving their set objectives. At the very instant violence break out, social relationships breakdown and this results in protracted tension (Crossin and Banfield, 2006). Verma (1998) cited in Mba (2013) states that, when conflict is destructive, it results in continuing loss of performance. Overabundance of studies construe dysfunctional conflict to be injurious to organizations and submit that it should be completely shunned. Others like Gardiner and Simmons (1992) opines that while restraining the harm caused by

dysfunctional conflict, project managers should encourage functional conflict to harness its effect and to help alter projects for the better.

### **2.3 Conflict Viewpoints**

Project related conflicts may be observed from three dissimilar viewpoints, specifically interactionist, traditional, and behavioral perspectives (Verma, 1998 cited in Femi, 2014). From plethora of literature, traditional viewpoint identifies conflict for instance as destructive, and has a negating consequence on achievement. And to avert viciousness, damage, and unreasonableness, conflict ought to be completely sidestepped. Traditional viewpoint responds to conflict by way of reducing, subduing, or eradicating it out-and-out. In an endeavour to side-step conflict, project or team manager in charge, according to Verma(1998) becomes dictatorial, and this makes it difficult for the core causes to be recognized, thus thwarting constructive features of conflict to surface. This viewpoint per Verma (ibid) is popularly held by firms and business groups which mostly control and affect our society. Regrettably, traditional understanding of conflicts produces labour unions (Verma, 1998).

The contemporary or behavioural view, as well acknowledged as the social relations view which emerged in the late 1940s (Verma, 1998) maintains a view that conflict is a normal occurrence and as such inescapable in all establishments; the outcome may be either helpful or harmful subject to the way it is controlled. Some amount of conflict possibly will result in increase in achievement growth, but may distract accomplishment once conflict deteriorates or abandon and unresolved (Verma, 1998). It is admitted by Khanaki and Hassanzadeh (2010) that conflict can be advantageous, and to that extent team leaders or supervisors must take the upper hand to augment novelty and ingenuity, instead of subduing



or stamping it out. Behavioural viewpoint recognises conflicts, then recommends that organisation manage it efficiently to be aware of the positive consequence of conflict.

The interactionist perspective intimates that conflict is essential to upsurge achievement. Distinct from behavioural view of accommodating conflict, the interactionist relatively emboldens it, since it is assumed that a too harmonious, peaceable, soothing, overlycompliant project firm is to be expected to develop into inert, uninterested, stationary, and incompetent in reacting to adjustment and invention. The perspective or the view encourages leaders to preserve conflict within a suitable confines that may make projects self-effacing, feasible, innovative, and ground-breaking (Ogunbayo, 2013).

#### **2.4 Nature of Construction Industry**

Human beings or people are the principal resource of all construction projects (Langford et. al., 1992). Construction professionals such as project managers, engineers, architects, and quantity surveyors are all core participants of each construction project. They are usually assembled or pooled from different firms and companies to form a project team. And each project team is a mini-society with intricate set of interrelationship requiring collaboration and cooperation from commencement to close-out of the project (Ogunbayo, 2013). They have diverse goals and needs, and each expect to make the most of their own interest (Newcombe, 1996; Cheung et. al., 2006).

The interactions between members of this temporary project coalition often leads to conflict sometimes as a result of mismatch of perception or expectations of other members. Again relationships in the industry are characterized as being antagonistic and confrontational (Saad et. al., 2002), there is a blame culture with strong disposition to using litigation to resolving conflict (Colledge, 2005).

Tazelaar and Snijders (2010) cited in Dada (2013) referred to other works to conclude that the harshness, pressures and toughness of the construction industry predisposes it to conflicts. Short term financial concerns often overshadow the potential benefits of developing and maintaining relationships beyond the limit of the project duration. The result is often the development of an aggressive „winner takes all“ project mentality. The use of threats, financial manipulations and other forms of coercion almost inevitably become an established part of the project environment or the construction industry.

Newey (1992) argues that since the industry is so large, there are so many individuals, companies, partnerships and Authorities engaged in it, construction work has to be carried out on the open sites in conditions very different from that which pertains in the manufacturing industry. He concludes that Failure by one or more can affect all engaged in a project and work often takes substantial periods during which economic conditions can alter, it is therefore inevitable that conflict arise. Researchers agrees that construction exist in an adversarial environment and that conflict is unavoidable on projects (Kassab et. al., 2010; Ng. et. al., 2007). Gale (1992) opines that the construction industry is conflictual in nature as a result of the industry“s „male culture“. He went on to suggest widening the base of female representation within construction disciplines, as a way of watering down the macho culture of the construction industry with some feminine attributes.

## **2.5 conflict Sources in construction of projects**

Many professionally qualified individuals are completely or partially involve with the construction industry in Ghana, including Town Planners, Architects, Service, Electrical, Mechanical, Civil, Structural Engineers, Project Managers, and Quantity Surveyors. All these individuals are pooled from independent firms or organisations to form a unit or a project coalition where the relationship between them grow into organizationally symbiotic

purposefully for a precise project execution. Walker (1989) cited in Yu and Leung (2001) perceives the status quo to be predisposed to conflict, for the reason of their divergent background and the requirements of the participants and that of the venture or project.

Present writings offers various causes of conflict in the building sector or the built environment, though other researchers used ten (10) variables in their study as causes of conflict, but others settled on less than six (6) variables in their research. But Lu and Leung (2001) gave five(5) wide regions of conflict in existing writings that relate to construction and that is; design, time, management, contract and economic. Kumaraswamy (1997) in his studies pinpoints some contrast between two key causes of claims and conflict in the construction industry, namely the core causes and contiguous causes. He further explained that contiguous or proximate causes are those that are straightaway obvious and are provoked by the client while core or root causes originate from other stakeholders.

Conflict can also ensue from technical issues and performance trade-offs. Team members on a project can have different suggestions and approaches to solving a problem, but each suggestion may have its merit and demerits. But the presentation, communication and acceptance from other team members may meet hiccups or setbacks. Group relations and personal relationships may also play out or contribute some conflict situation. Resources for project execution have also been in issue in respect of availability in adequate quantities and acceptable form of the resources for the execution of the project. The resources in question include machinery, materials, money, manpower etc. required for the execution of the project. Similarly organisational pressures, inconsistent or erratic demand from team members, time and other deliverables could cause tension leading to conflicts on projects (Dada, 2013). Table 2.1 offers some causes of conflict offered by various authors in their studies.

**Table 2.1: Causes of conflicts in construction by various authors**

Writers	Date	Causes of conflict
Tipili et. al.,	2014	Inadequate communication
Li et. al.	2012	Mismatch in people's perception and expectation.
Yiu & Cheung	2007	Delay; site access delay, delay in running bill, delay in decision by owner. Unrealistic Expectation; scope definition not clear, excessive change orders.
Acharya & Lee,	2006	Differing site condition, Errors and omissions in design, Local people obstruction, Excessive quantity of works, difference in change order evaluation, double meaning in specification.
Mgbekem	2004	Task dependence, scarce resources, goal incompatibility, communication failures, poorly design reward system, individual difference.
Killian	2003	Pre-award design, change orders, pre-construction challenges and quality assurance.
Kumaraswamy	1997	Changes of conditions, changes of scope, unrealistic expectations, communications, delays, unpredictability, contract document.
Conlin et. al.	1996	Payment and budget; delay and time; budget performance; negligence; administration
Rhys Jones.	1994.	Poor communications; Inadequate design; Economic environment; Poor management; Unrealistic tendering; Inadequate contract drafting; Poor workmanship; Adversarial culture

Author construct, 2015.

The seemingly unanticipated causes of conflict are linked with project commencement and definition. These emanates from unrealistic expectations, misunderstandings, absence of cohesion, communications, modification of scope, insufficient contract records (Yu & Cheung, 2007; Blake Dawson Waldron, 2006).



However, Hellriegel (1986) cited in Femi (2014) classifies conflict into levels based on interaction between persons or human functioning within and outside the group or team. These groups of conflict are the intrapersonal conflict, the interpersonal conflict, the intragroup conflict and the intergroup conflict. The intrapersonal level which he states, thus occurs to an individual in respect of the conflict of the mind, a state of paradox. The kind of conflict most human faces within themselves. Intrapersonal conflict arises when one is face with having to take a crucial decision.

On the other hand the interpersonal conflict is a form of conflict which occurs between two or more individuals have opposing views, goals, interest, attitudes, or values among other things. In fact literature has it that, interpersonal conflict is one of the top occupational job stressor (Liu, 2002).

And intragroup conflict speak of a conflict between some or all of a group's members within the team or a particular group. It refers to members of the same group, simply put an in-fighting within a group, probably as a result of task-related disagreement or emotions-based disagreement. Unlike intragroup, the intergroup conflict thus occur between two or more groups within an umbrella organisation. It is sometimes driven by ethnicity, religion, and levels of decision-making. These groups could be either recognised groups or informal in nature, and may differ in their agenda, prestige and work activities. Similar to the intragroup is the intra-organisation, which occurs between two or more parties working together on a common project in an organisation. And it may come about as a result of the location of formal authority and the manner in which job or schedules are designed.

### **2.5.1 Conflict arising from contract document**

According to Nasir and Khamid (2013) cited in Femi (2014) the significant point still remains that the construction industry is well known for its high level of inter-personal and

inter-organisational conflict. Researchers and Government Reports (Lathan, 1994) assert that the construction industry is observed to have a culture of conflict (Langford and Murray, 2008), project performance is thus consequently reduced and dissatisfaction ensues; in which all parties apportion blame and seek redress from contract provisions. And as stated by Shapiro (2005) contracts in the construction industry are the primary source of most conflicts in the industry. And as such considerable percentage of most claims emanating out of construction stand-off stems from the contractual relationships among the parties. Further, he adds that it is the understanding by way of contract which defines most of the responsibilities between the contracting parties; and has therefore been the very source of most of the claims by the parties against each another.

And to reduce such stand-off in the construction industry, the use of Standard Forms became the norm but as with most construction projects, the uniqueness of each project made it a challenge in using the Standard Forms. Therefore the one-size fit all agreement or contract did not work as envisaged. This necessitated the amendment of Standard Forms for specific projects, but a number of professionals believe that contracting parties should not alter or change Standard Forms by choice, as there is a complex interaction between many of the terms (Ndekurgu and Rycroft, 2009), such modification can change the balance of risk and create legal uncertainty, and by extension conflict. Although the contract document hexes out the responsibilities of each of the parties involved in the construction, very little attention is given to the fine details in respect of time and effort by the principal actors, resulting in critical omissions and areas of ambiguity. The construction sites (Clegg, 1992) are well organised by contractual relations to a greater extent than many other establishments. Clegg (ibid) continues that aside labour agreements with labourers which are fundamental, virtually everything at the construction sites is put in the contract form or contractualised: “who can do what”, when, where, and in what order and using what materials, and per what

know-hows, and at what measured costs, etc. According to Clegg (ibid), the contract stipulates the significant variables apropos to construction, but deficient in its own „taxonomy“ or indexicality; the way it must be delivered, construed and be used by work-related and managerially unscrupulous or self-seeking parties to the prescribed relationship. In support Borvan (2011) found that the degree of conflict is dependent on its nature of cause, content and complexity of the contract agreement. The construction industry is perceived by Clegg (1992) as integral to conflict because of its complexity tied with vested inter-group and inter-work-related interest.

There are two main issues in the contract document according to Sharpiro (2005) that may result in conflict namely the abuse of Standard Forms and faulty contracts.

#### **i. The five “I’s” of contract**

The attempts in customising Standard Form or drafting additional terms results in what Shapiro (2005) calls the five “I”s, that is, **incomplete contracts, inappropriate contracts, incompatible contract, incomprehensible contract, and inequitable contract**. The five “I”s” according to Shapiro (2005) leads to misuse and eventually to irreconcilable inconsistencies at huge cost and time expenditure to the parties. He clarified the five “I”s as; Incomplete contracts are insufficient and do not entirely address all the material facts, which when group together represent an inherent risk to the project. And when part of the risks are unaccounted for or unassigned, it can lead to conflict and disputes which may be problematic and difficult to settle.

The Inappropriate or unsuitable contract is a contract which is not apropos or do not encompass words which speaks to the perils accompanying a specific building project condition. Contracts of this kind is likely to result in imminent rancour and litigation.

Incomprehensible or inconceivable contract is “contract which is internally equivocal, vague, varying or impracticable, such that these types of contracts or agreement typically leads to abuses in the contract routine by the participants involve”.

Incompatible or irreconcilable contract is contract which ends in disparity among the project perils and duties of the different contracting parties. Since the players are interrelated and act together among themselves in an on-going construction projects, it is prudent that the contracts nexuses is so well spells out that, the responsibilities of the players is well laid without gaps and overlaps. For example, the contract between the project design expert or team and the vendor and the contractor be so distinct from each other. As a consequence, the vendor’s agreement with the design team or expert be compatible with the vendor’s separate agreement with the contractor. And by so doing a seamless joint is formed between the various agreements, so that the designer will have the authority to provide contract administration services as may be stipulated in the contractual plan between the vendor/promoter and the contractor without hiccups or any confrontation.

Inequitable or unfair contract does ensue when contracts are bereft of fair-mindedness or “impartiality” amongst contracting participants to the contract, in a way that makes the contract lopsided, imbalanced or skewed in support of one contracting participant, usually the vendor/promoter. This consequently will result in suspicion and demands as the work progresses.

### **2.5.2 Conflict between stakeholders**

Conflict between contracting firms or organisations may be understood as an unavoidable by-product or consequence of organisational activities. The parties to a project, be they client, consultants, contractors, suppliers, sub-contractors, undoubtedly have an interest in the successful completion of a project in a way acceptable to each of them.



As such conflict between these individuals or organisation is a must as the project progresses. Clients of projects are often quarrelling and questioning their consultants in respect of incomplete design, omissions in scope brief, low aesthetic appeal, and budget overruns (Shapiro, 2005). Conflict again is relatively common between the client and the main contractor usually related to late payment, construction failures, disagreement over the payment for extra works and change orders.

Client and contractors often contend over design as opposed to construction failures. In addition, the comparative responsibility of each stakeholder, for a failed design or a construction element, culminating in a structure which neither meets the owner's financial or useful requirements nor fulfil the very reason envisioned by the client/vendor may lead to or result in a tripartite conflict, that is, conflict involving all three major stakeholders at the same time – the client, the design team/consultant and the contractor. Each trading blames, accusations and counter accusation.

Also consultants and contractors more often accuses one another, over material quality, design and workmanship errors. Another area of conflict commonly identified is between the main contractor and sub-contractors (Harding, 1991), and is often about late payment of interim certificates, disagreement over the payment for extra works, and schedules. And these conflict can be rancorous but these are usually solved by the dominance of the main contractor or by legal means allowed or permitted by the contract. Conflict between domestic sub-contractors often present an interesting challenge because of their relative equal stature, and do not directly have any relation between them but owe their submission to the main contractor. This kind of conflict frequently occur between the Finishes subcontractor and the Service sub-contractor.

Role uncertainty in construction leads to conflict as well. A major source of conflict between contractors or between sub-contractors is at the boundaries of their work packages. Sometimes it is the gap between the packages that causes the uncertainty, when it becomes apparent that, due to an oversight by the consultant or the construction manager or the management contractor, vital work is left unattended to because it was not specifically assigned to anyone or included in any of the packages.

Additional factors that causes conflicts to arise between the teams include a poorly defined scope, poor communications among team members, mismatch of interests, uncertainty and unrealistic expectation (Yu and Cheung, 2007; Shapiro, 2005). A poorly defined scope generates hostility between the client and the contractor (as the contractor demand payment the “creep”), and between the client and the design team (for excluding client specific items from his/her brief). The design team as part of their responsibility are oblige to outline and design the project scope which meets the client’s wish in respect of the usage, safety, aesthetics, life cycle cost, time and quality project criteria. And when the designed project flops in meeting these requirements, the client becomes disappointed and acrimonious communication ensues between the parties. Much the same way, when the scope is ambiguous and tentative it may result also in an unfriendly and bitter relations between the client and the contractor.

Communication is basic to all working environment, communication in fact is the central spine of every organisation, construction organisations not excluded.

Communication failure is likewise seen as ubiquitous cause of conflict among the project team members (Cheung and Yu, 2006). Problem in communication often arises as a follow up to a condescending behaviour, lack of respect, perception incongruence and defective listening. Communication breakdowns results in incorrect interpretation of drawings;

misconstrued change orders, increased and wrong lead times for crucial material delivery to site; incorrect execution of instructions (Ogunbayo, 2013; Tipili et. al., 2014).

Mismatch and unrealistic expectations according to Li et. al. (2012) can also generate conflict between stakeholders of a construction team, especially when the parties hopes are raised and dashed or are not met as expected. For example, when the project is running late and behind planned schedule, when the budget is running through the roof, and workmanship do not in any way equals what was envisage to be of a higher quality construction. The client in the state of disappointment will make claims or pursue legal redress.

Anderson Jr. and Polkinghorn (2008) confirming also pinpoint circumstances that could cause conflicts in construction works specifically; designers contest blame for errors and mistakes, contractors bring claims against owners; the public repeatedly feels short - changed in term of decision making. The works may face environmental challenges that the designers didn't think of in their design, or neighbouring residents may rise and oppose the project only after it takes off. The above listed situations by Anderson Jr. and Polkinghorn (ibid) leads to delays, safety issues, cost overruns, inconvenience to the public, and timewasting lawsuit.

## **2.6 Managing Construction conflict**

It is a shared belief that the construction industry's culture is "adversarial" and prone to conflict in its negative sense (Lathan, 1994). Agreeing Esquivel (1997) confirms that construction conflict is dysfunctional and something undesirable to be shunned, because it produces ineffectiveness in firms and injurious to organisations. Lathan (1994) by reference to the construction industry's "culture of conflict" portrays construction conflict as undesirable, perhaps because it is conflated with confrontation, mistrust and disputes. In consonance with the above position is Higgin et. al. (1966), who regarded conflict as a self-

evidently “a bad thing”, one of construction’s main problem; misunderstanding, abortive work, delays, confusion and errors. And the focus have always been on avoidance, and elimination.

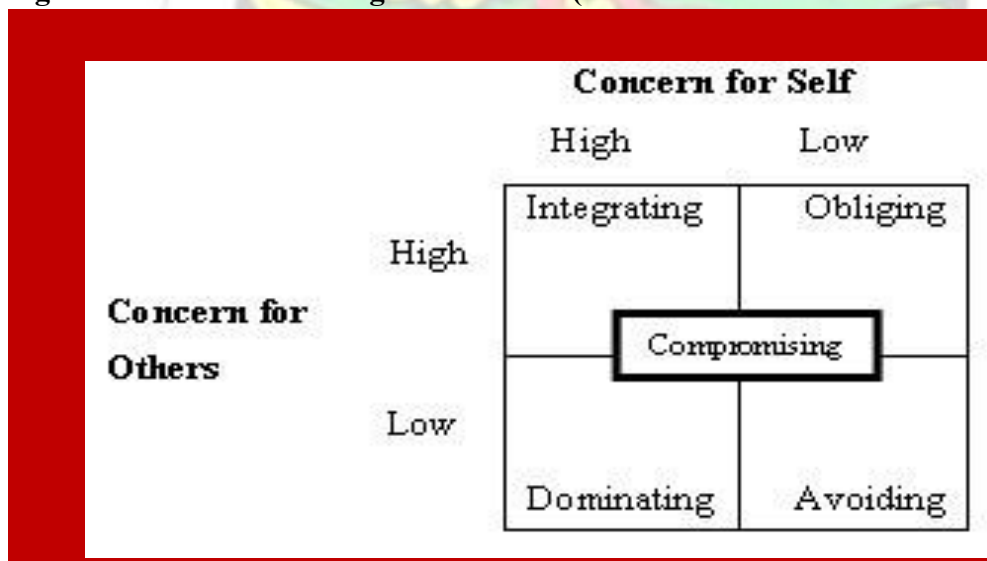
But Rahim (1992) opines that “Organisational conflict must not necessarily be reduced, suppressed or eliminated, but managed to enhance individual, group and organisational effectiveness”. Position such as this have been characterised as “pragmatic” that is by accepting the inevitability of conflict and focusing on their management instead of their elimination. Problems in the construction industry such as instability, lack of apropos communication, fragmentations, improper coordination and short-termism have indeed focus some minds on escaping the potentially adverse effects of conflict, instead of maximising the potential benefits that may accrue from the conflict. Mary Parker Follett (1940) saw conflict as inescapable (rather than a failure of a system), and performing positive functions if properly managed. She further surmised that “all polishing is done by friction”. Nonetheless, the use of the conflict management models is conditional on a particular circumstance, that is, a particular style may be more apropos than the other subject to the situation (Lee, 2008).

Conflict management according to Follett (1940) can be conceptualised under five methods namely; avoidance, suppression, domination, integration and compromise. Besides Follett other equally popular conflict management style have been proposed by other researchers and writers. The ones that often cited by other researchers and writers include the Two-Factor Theory by Rahim and Bonoma (1979); the Single-Dimension Model by Deutsch(1973) and the Thomas-Kilmann Mode Instrument (2010). Plethora of Literature nonetheless differentiates among the two key models as Single dimension model or Two dimension model, while maintaining that the widely cited is the Two dimension model albeit in different names.



Rahim and Bonoma (1979) defines the Two Dimension Model as concern for self and concern for others, but Blake and Mouton (1970) describes it as self-oriented and otheroriented concern. Conversely, the Single Dimension Model does not consider concerns of both parties, but measures only the level of selfishness or competition. Rahim and Bonoma (1979) postulates five different conflict management styles namely; avoiding, dominating, obliging, integrating and compromising. The dimension thus explains the level to which an individual is willing or would be willing to satisfy the other person's concern (Fig. 2.1).

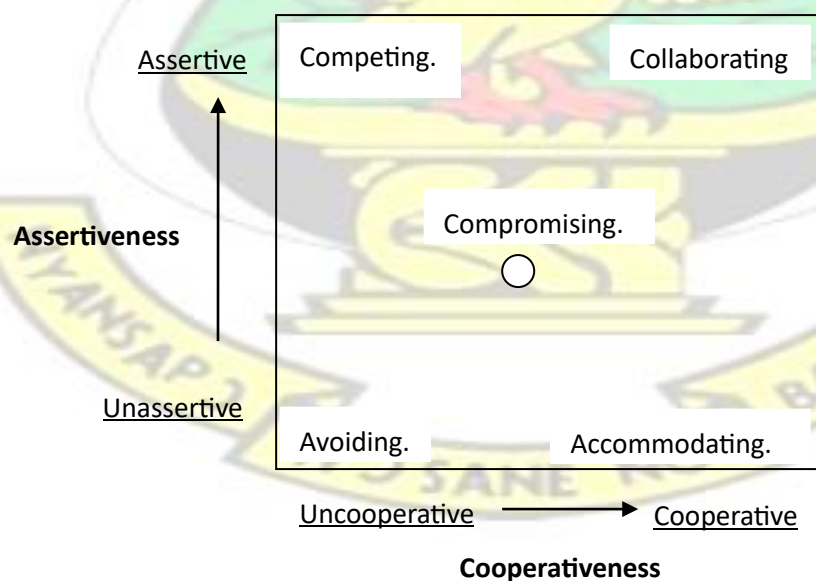
**Figure 2.1: Conflict Management Model (Concern for self and Concern for others)**



Source : Rahim and Bonoma (1979).

Thomas and Kilmann (2010) offers five(5) modes conflict management namely: compromising, competing, collaborating, accommodating and avoiding. The ThomasKilmann Conflict Management Mode Instrument (TKI) “measures a person”s attitude in conflict situations, that is, in situation where the concerns of two individuals are incompatible”. They describe individual”s behaviour in two basic dimensions; assertiveness and cooperativeness. Assertiveness measures the extent to which the individual attempts to satisfy his/her own concerns, whereas Cooperativeness refers to an individual”s willingness to satisfy the other person”s concerns (Figure. 2.2). Judging from Bonoma and Thomas-Kilmann”s description of the Two dimension model, it can be concluded that the two perspectives are congruent and converges in fact. As a result, the study choses the two dimensional model as an ideal style in managing construction conflicts. Conflict management suggested by Thomas and Kilmann is employed.

**Figure 2.2: Conflict Management Model (assertiveness and cooperativeness)**



**Source: Thomas and Kilmann, 1974.**

### **2.6.1 Using Thomas-Kilmann Conflict Management Model.**

Thomas-Kilmann model of conflict management "suggests five(5) styles namely, avoiding, accommodating, competing, compromising and collaboration. Competition has been called the “zero-sum game” where one person wins and the other loses. The individuals in conflict situation tend to be extremely assertive and very concern for self (dominating) than for others. Lu and Leung (2001) referred to competing mode as win-lose style. An individual dominating often uses threats, power position, aggression, manipulation, and the protection of assumed positions (Zikmann, 1992; Lee, 2008). The obsession with winning under competing mode according to Zikmann (1992) results in the opposing party withdrawing cooperation and taking a position to defend his/her adopted stand. Blake and Mouton (1964) describes the competing mode as direct and uncooperative. But effective when quick, decisive action is crucial in organisational contexts. This mode has been critiqued for its social inappropriateness as well as the likelihood in worsening response to conflict; because it demotes the concerns of other individuals (Zikmann, 1992).

The avoiding style is neither cooperative nor assertive. It offers no priority or preference to both concerns relative to the parties; it is regarded as lose-lose style (Lu and Leung, 2001). To Thomas-Kilmann (2010), a party may be aware of a conflict within a project team but may diplomatically sidestep or postpone the issues. It may according to Thomas-Kilmann (ibid) also mean withdrawing entirely from a threatening situation. They stated that this style is normally useful when the cost of tackling a conflict far outweighs the benefits of it settlement. Lee (2008) in support also referred to this style as a side-stepping and a buckpass of the issues in conflict. He articulates that the Avoiding style is most useful when the issues in conflict are trivial or has a tendency of becoming destructive.

The accommodating mode or style is unassertive and cooperative, and is also labelled as lose-win style of managing conflict. Individuals who chooses this mode of managing conflict

are referred to as conflict absorbers. They tend to sidestep their own concerns in favour of the opposing party's interest or concern. Individuals who choose this mode of conflict management according to Lu and Leung (2001) will rather maintain a relationship than to have their way. Rahim and Bonoma (1979) referred to the attitude of low concern for self and high concern for others as obliging, otherwise called accommodating by Thomas-Kilmann (2010). There is an altruistic attitude or self-sacrifice in this mode of conflict management. It may be used when one wants to develop social credit as a strategy for later issues that may be of paramount interest to the individual. Especially when it is equally important to preserve harmony and to protect the project from disruptions

(Thomas-Kilmann, 2010).

Collaborating mode or style is both assertive and cooperative in equal magnitude, that is, high on assertiveness and high on cooperativeness. Collaborating according to Rahim and Bonoma (1979) is one and the same as integrating. The individuals are highly concerned for self and highly concern for others in the same measure. Most literature refers to this style as a win-win style. In collaboration the individual works in tandem with the other party to find a common solution that fully answers the concerns of both parties. As in our cultural parlance "ti kro enko a gyena" to wits "two heads are better than one". Collaborating between two individuals according to Thomas-Kilmann (2010) might take the process of exploring disagreements to mug up from each other's intuitions, resolving concerns that would otherwise have them competing. The individuals are willing to settle the difficulty by making modest the differences between them by sacrificing part of their assertiveness to gain on cooperativeness. The parties often deliberate until an acceptable decision is reached between them. Collaboration upsurges individual and team effectiveness, as typified by greater satisfaction and feelings of self-efficacy among conflicting parties, and more beneficial solutions reduce the likelihood of future conflict (Tjosvold, 1997 cited in Kiani et. al., 2012). This style is more appropriate when you want to merge insights from people with different



perspectives on a problem and when you wish to gain others commitment by fitting in their concerns in the final decision.

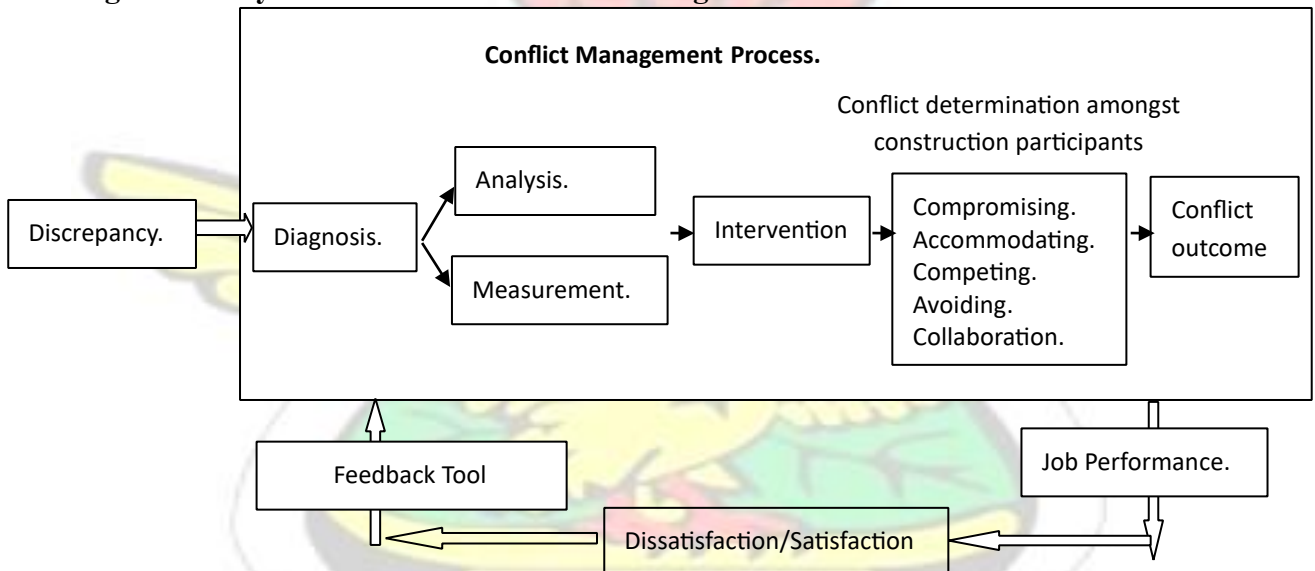
Compromise mode is a style that declares neither a loser nor winner. For the French the compromise mode is a “lose-lose” decision, something that should not be encouraged. But Zikmann (1992) sharply contrast the French position and affirms that most managers in the construction industry submit to the opinion that compromise is the best response as it usually guarantees that the requests of all parties are at a minimum “partially met”. And when individuals can be contented that their desires can in time be met, it will be far more probable that they will be willing to amend their adopted positions. Compromise according to Thomas-Kilmann (2010) might mean splitting the difference, exchanging concessions, or seeking a quick middle-ground position. Thomas-Kilmann (ibid) adds that compromise is apropos when two opponents with equal power are strongly committed to mutually exclusive goals, example, labour-management bargaining. But over reliance or an overuse of this mode generate a cynical environment of gamesmanship.

## **2.7 Conceptual Framework**

The framework adopted in this research was advanced by Yu and Leung (2001) in a research of an investigation of Construction Conflict Resolution in Hong Kong. And within the model, conflict management is divided into two important steps, that is, analysis and intervention. The analysis involve the measurement as well as the analysis level for recognizing the conflict within the firm or organisation, though intervention include structural and behavioural methods for setting the ideal level of conflict. By the Behavioural method or approach, conflict may be resolved by assertiveness (concern for self) or by cooperativeness (concern for others). Conflict according to Ban (1995) is like water; too much and it causes damage to people and properties; too little and it creates a dry and barren

land devoid of life and colour Therefore, an optimum level of conflict is needed to yield high job performance and participant fulfilment. And as in the model, the stage of fulfilment is the feedback tool inducing probable conflict between the participants in successive works, and thereby making the model cyclical in its application. The figure below (Fig. 2.3) presents the framework for solving conflicts.

**Figure 2.3: Cyclical Model for Conflict Management in the Construction Sector.**



**Source: Adopted model, Lu and Leung, 2001**

## CHAPTER 3

### PROFILE OF STUDY AREA AND METHODOLOGY

#### 3.1 Introduction

A number of methods are available that one can use in carrying out a research, however the method to be employed must of a necessity depend on the research strategy, design and philosophy. The very rationale behind the choice of a particular method or a way of carrying out the research is for the process to be scientific, rigorous, systematic and as much as possible free from biases. The chapter defines the study strategy assumed or accepted and then discuss the population, the sample determination method, the data collection tools and processes, and the diagnostic tools employed.

#### 3.2 Research Design

There are three (3) main techniques used when carrying-out a research namely; quantitative, qualitative and mixed method according to Neuman (2007). A particular design may very much be contingent on the assumptions in respect of the nature of information and actuality, and how an individual discerns knowledge and actuality, as well as the procedure of obtaining knowledge about reality (Saunders et. al., 2007). And based on the aim of this research, quantitative research design is appropriate. Quantitative method consist of large population and permits numerical analysis built on facts collected via surveys and experiment (Saunders et al., 2007).

A cross-sectional survey method was seen as appropriate for such research and information were gathered via administration of questionnaire. The survey applied standardized instruments, so that the changing viewpoints and experiences of people suited a limited number of scheduled response categories, to which numbers were allocated and measured

statistically. As a survey study, a sample was taken and the result was used to make inferences about the population which was astronomically costive to study (Neuman, 2007).

### **3.3 Study Population**

Based on the subject of the research and the need for diverse views across the construction industry D4 (representing the least in grade) to D1 (also representing the highest in grade of building contractors) were all included in the target group. The focus of the study is on the stakeholders in the construction industry in Ghana who carry out project specifically in Kumasi and its immediate environs. The stakeholders are mainly client/promoter, project managers, contractors, sub-contractors, suppliers, quantity surveyors, engineers and architects. And since these stakeholders are dispersed nationwide and the research limited to Ashanti (Kumasi and its immediate environs) participants chosen were the ones located and identified in Ashanti (Kumasi and its immediate environs). The selected participants for the research were construction firms which had registered with Kumasi Metropolitan Assembly, Asokore Mampong Municipal Assembly and the Ejisu-Juabeng Municipal Assembly. The list as obtained from the Assemblies revealed that there were 220 construction firms that have accordingly registered with the assemblies as at July 2015.

### **3.4 Sampling Technique and Sample Size**

And out of the obtained population, a sample of 140 registered firms were carefully chosen for the research. And using Kreicie and Morgan table as a guide a sample size from the known population was established. The firms were coded and the sample randomly picked. And for any of the company that was picked, a representative of the company, either the project manager, the site engineer or the quantity surveyor was made to stand in for the company. The list as obtained from the assemblies however, were deem by the researcher to



be incomprehensive, since it lacked certain class of companies. The researcher however, purposively chose five (5) companies whose names he did not find in the list and added it to the sample mainly because of the volume of work they undertake within the area under the study. An additional fifteen (15) members were also conveniently picked from architects, project managers, quantity surveyors and clients for the research, making a total of 160 participants for the research. And statistics-wise the sample size was sufficiently big for a significant analysis (Mason et. al., 1999).

### **3.5 Data Gathering**

And to address the question of the research, appropriate information needed to be collected in a manner permitted under such research. The information or data needed for the study according to Hussey and Hussey (1997) can be either collected as a secondary data or primary data. The primary data as explained by Hussey and Hussey (ibid) are data gathered from the field and secondary data are data gleaned from existing writings. And both primary and secondary data are used in this study.

The theory based discussion done in chapter two of this study was acquired basically from existing literature or secondary source. The present literature like conference papers, journal articles, and web sites of professional bodies, databases and books were all consulted for indebt information on sources/causes of conflict, its effects and their management. The primary data on the contrary was the data gleaned from the field using the data gathering tools like questionnaire survey, from which the key findings and results emanate. The data thus therefore become the new revelation in respect of the study area.

### **3.6 Questionnaire Development**

One technique used in collecting or gathering data for the purposes of research is the use of questionnaire survey. Questionnaires are highly structure way of collecting precise information as a reply to highly directed questions. Some researchers like Al-Assaf (1995) asserts that a questionnaire has the advantage of increasing the generalization of data while at the same time granting respondents the freedom to express their views. The study data therefore was gathered through questionnaire survey. Questionnaire survey were considered apropos because is cheaper and less time consuming than conducting an interview, besides very large samples can easily be gathered. This technique is consistent with the assertion by Easterby-Smith et. al., (2002) that questionnaires are the most frequently used method in the social science field.

The measurement of items were form from existing literature and the writings of ThomasKilmann (2010), Yu and Cheung (2001), Kumaraswamy (1997), and Rahim and Bonoma (1979). The questionnaire is structured in five levels, that is, the demography level, causes of conflict level, effects of conflict level, and management level. Majority of the questions are close-ended with few open-ended questions. The open-ended questions were to tease out challenges to conflict management, which may be person-specific and particular in nature to the participant. The close-ended questions are very constrictive asking participants to measure issues of conflict on a five Likert scale.

#### **3.6.1 Questionnaire Administration**

The structure questionnaires were thoroughly check to confirm it's unambiguous, lucid and well understood. This was achieved by pilot testing the sample questionnaire with three projects initially in Kumasi and desk-checked to correct all ambiguity and repetitions. This

was to make sure that responses from participants were in accordance with the purpose of the study.

The researcher before administering the questionnaire brief participants about the study purpose and expectations. Anonymity and confidentiality of participants were guaranteed by the nature of the survey.

### **3.6.2 Measurements**

The study questionnaire administered were to measure the objectives of the research. The first measure was the causes of conflicts. A number of causes were identify in literature and were thus divided into two, namely contract-related causes and general causes. The initial measure was causes of construction conflicts. A number of items were acknowledged in existing writings as causes and these were set into two (2): General sources of conflicts and conflicts arising from the Contract documents. Respondents were tasked to show the degree to which the items outcome in conflicts on five (5) point Likert scale where 1= Not at all, 2 = occasionally, 3 = sometimes, 4 = usually and 5 = always. And the next measure was the consequence or outcome of project conflicts; a number of items were tabled and respondents were tasked to assess the items on five point Likert scale where 1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always. The penultimate measure, was conflict managing approach be it competition, collaboration, compromise, avoidance, and accommodation. Respondents were tasked to specify the method or style through which conflicts are to be handled on a Likert scale where 1 = almost never, 2 = occasionally, 3 = sometimes, 4 = usually and 5 = almost always. And lastly the questionnaire sought to tease out experience by allowing participants to freely surmise their view on conflict issues.

### **3.7 Data Analysis**

Statistical Package for Social Scientist (SPSS 16.0) and Microsoft Excel were used in analyzing the collected data. Although a number of software thus exist for such research computations, the researcher's insight in SPSS and Excel made the two techniques the researcher's favored picks. The SPSS was used to perform Spearman correlation analysis while relative importance indices were performed using Microsoft Excel including the charts that are generated to depict findings. The package was applied in generating descriptive statistics and Spearman correlation analysis. And a Microsoft Excel was also applied in generating relative important indices and chart to back findings. Mean values derived from the measurement of the items and the relationship between the variables are established.

### **3.8 Profile of Ashanti Region**

The Ashanti region is presently the second most urbanized in the country after the Greater Accra region (87.70%) ([www.ghana.district.com](http://www.ghana.district.com)). the high level of urbanization is due to the high concentration of the population in the metropolis and its immediate environs. The population in the metropolis and its immediate environs account for one third( $\frac{1}{3}$ ) of the region's population (Population census, 2000). Ashanti region also has the second largest economy in the country and have a tendency to attract people from all walks of life, particularly because of its central location relative to the remaining nine (9) regions. It is the most populous region in the country and occupies a land size of 24,389 square km.

Ashanti is politically divided into thirty assemblies; twenty two (22) of which are District Assemblies, seven (7) Municipal Assemblies, and one (1) Metropolitan Assembly. Kumasi is the capital city of Ashanti region. Economic activities in Ashanti Region can largely be classified into agriculture, wholesale and retail trade, manufacturing and community, social service sectors. The Assemblies that make up the Ashanti Region are; Adansi North,



Adansi South, Afigya Kwabre, Ahafo Ano North, Ahafo Ano South, Amansie Central, Amansie West, Asante Akim Central Municipal, Asante Akim North, Asante Akim South, Atwima Kwawoma, Atwima Mponua, Atwima Nwabiagya, Bekwai Municipal, Bosome Freho, Bosomtwe, **Ejisu-Juabeng Municipal**, Ejura-Sekyeredumase, **Kumasi Metropolitan**, **Asokore Mampong Municipal**, Kwabre, Mampong Municipal, Obuasi Municipal, Offinso South Municipal, Offinso North, Kumawu, Sekyere Afram Plains, Sekyere Central, Sekyere East, and Sekyere South.



## CHAPTER 4

### DATA PRESENTATION AND ANALYSIS

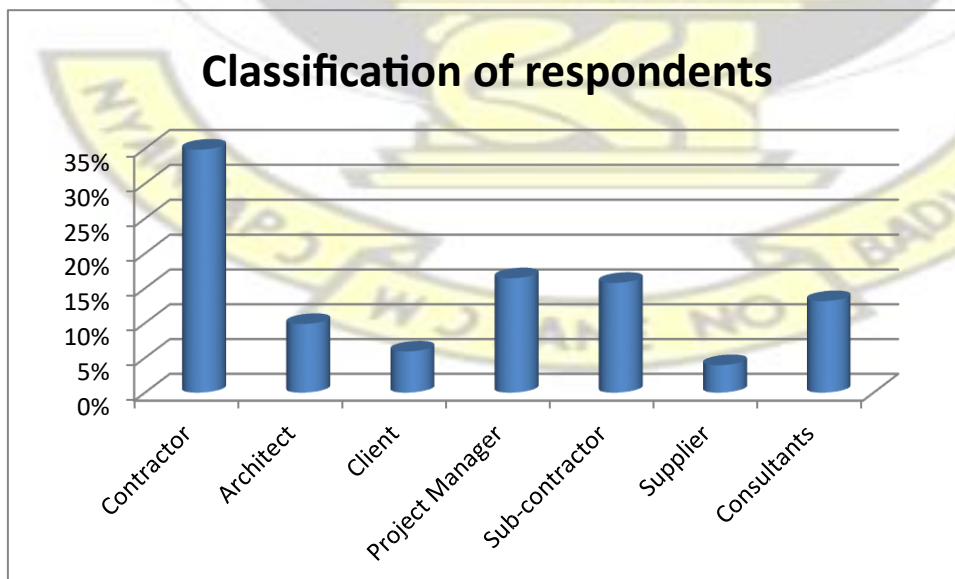
#### 4.1 Introduction

The chapter is structured in line with the objectives of the study together with the demographic characteristics of the respondents. The findings are also structured and put forward in the body of frequency distributions, descriptive statistics, chart and tables to facilitate examination and analysis of the patterns of the responses.

And from a total of 160 questionnaires that were circulated, 154 were received and thoroughly checked for completeness. But in the course of coding and desk-checking two of the questionnaire were found to have been duplicated and as such were rejected. The number of questionnaires that were available for the analysis was 152, producing a response rate of 95%.

#### 4.2 Demographic characteristics of participants

The figure depicts the demography of respondents who were carefully chosen for the study. The respondents who participated in the survey were predominantly males.



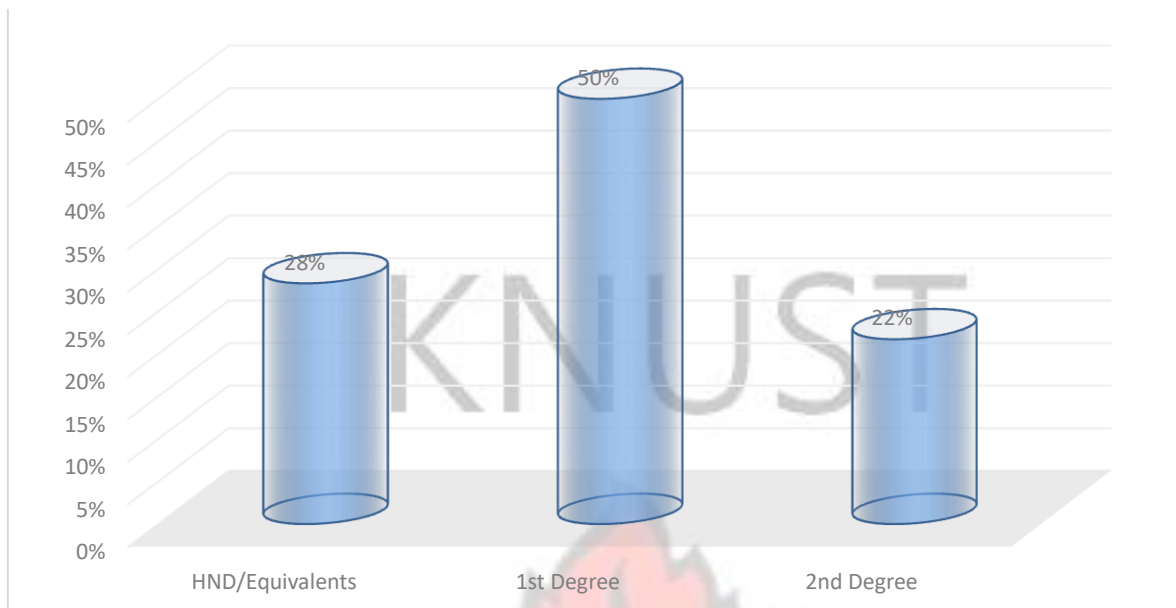
#### **Figure 4.1 Classification of respondent Source: Field survey 2015**

From the survey, contractors were 35%; sub-contractors were 16%; architects were 10%; clients were 6%; project managers were 16%; consultants were 13%; and 4% were suppliers. The bracket of client contains public companies, department and agencies, state own-companies, metropolitan, municipal and district assemblies, public schools; both secondary and tertiary.

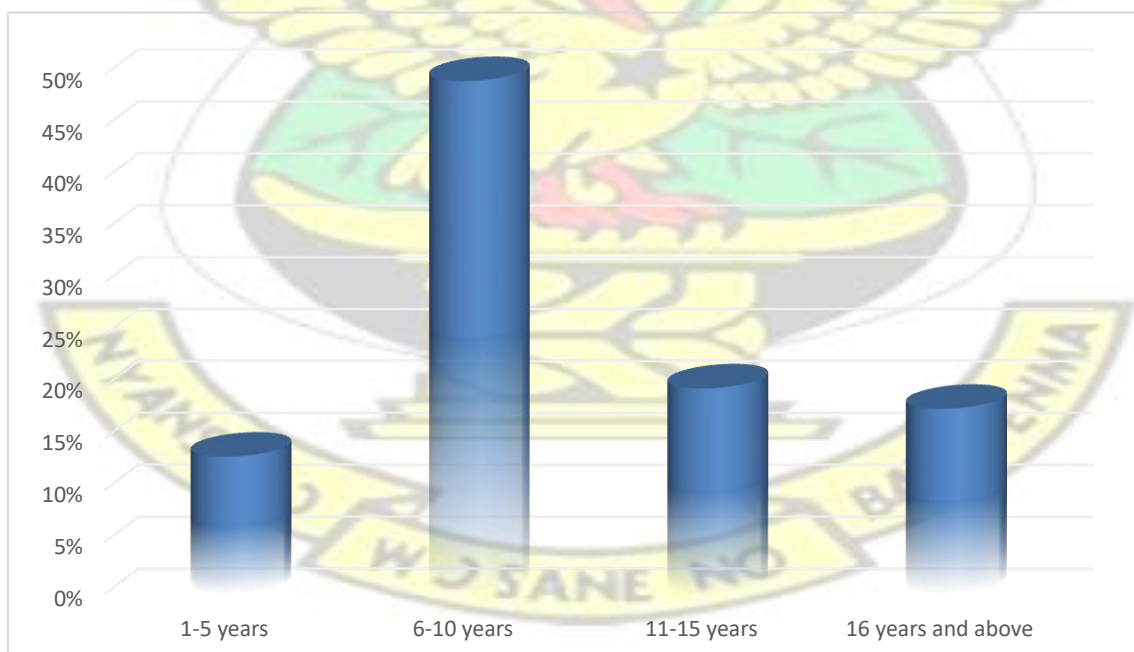
And in respect of level of education of the participants the survey (Table 4.2) reveals 28% are HND/Other Diploma Holders; 50% are First Degree Holders and 22% of the total number of participants have had their second degree or are Second Degree Holders.

Closely related to the respondent's qualification is their level of experience in or with the construction industry. The respondents in the survey have various level of experience ranging from year one (1) to sixteen (16) and over. And 13% of the participants who volunteered in the study have had 1 to 5 years of experience in the industry, likewise 49% have worked for 6 to 10 years, so has 20% worked for 11 to 15 years and lastly the an 18% of the participants representing the most experienced, have worked for 16 years and over.

And judging from the responses a total of 87% of the respondents have worked in the construction industry for more than six (6) years. While 38% of the respondents representing those that have worked beyond ten (10) years in the building industry. The entire number of respondents under the study were learned and capable of giving plausible responses to the questions that were asked. Besides, 72% of the respondents had schooled up to the university level and 28% to the polytechnic level. The high level of education of the respondents reflected in the kind of responses that were given in the area of causes of conflict, its effects and in their opinion how they should be managed at various project site. Their responses can therefore be relied upon as a true picture of the construction industry as of today.



**Figure 4.2: Frequency distribution of educational level of participants Source: Field survey, 2015**

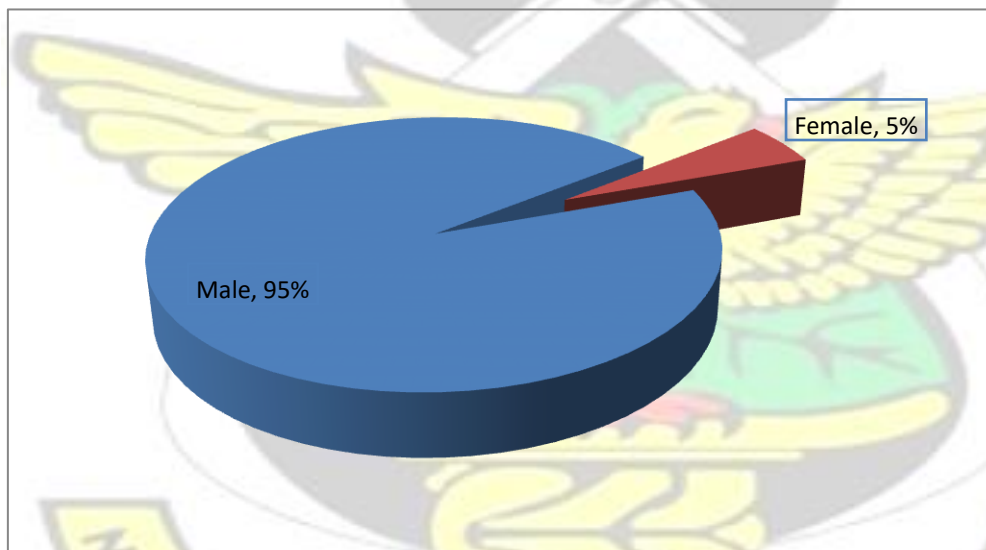


**Figure 4.3 Frequency distribution of Participants Working Experience.**



**Source: Field survey, 2015**

From the responses gathered from the participants, the gender imbalance in the construction industry in the study area was ubiquitously clear. Out of 152 participants a disproportionately low number of 8 participants represented the feminine gender. This brings to fore the argument for increasing the number of women in construction. Proponents of this argument suggest that the inclusion of more women in the construction will gradually affect the macho culture of the industry. This stand is firmly supported by Gale (1994) who suggest that “a greater concentration of feminine attributes in the construction process could benefit an industry which is conflictual because of its male culture”.



**Fig 4.4: The gender distribution of participants.**

**Source: Field survey, 2015**

**4.3 Causes of conflict in construction of public projects in Ashanti Region.** A number of items on causes of conflict were probed of several construction industry players. And to help delve deep into the matter, the study divided the causes of conflict into two categories, namely the general causes and contract-related causes. Among the objectives of this study is

to identify the causes of conflict in the construction of public building projects, and as such, participants were requested to rate how often each of the causes occur.

#### 4.3.1 The general causes of conflict

From the questionnaire instrument that was used, a 15 number items representing general causes of conflict were used to elicit the opinions of the participants as to which of the items among the 15 items listed causes conflict often in the construction of public buildings in the Ashanti Region. The “mean values” as obtained from the analysis of the responses of the participants in respect of general causes of conflict in the study area is as contained in Table 4.1.

Again from the results, the respondents concede that each of the items under general causes of conflict, indeed causes conflict in the construction of public building projects. The number of times a specific item or cause of conflict occurs has been established and ranked. From the 5 point scale measure used in the questionnaire, two evolved, according to the mean values generated by the responses of the participants. The approximated mean values that evolved are as follows; approx. mean value of (3.0) corresponds to “Sometimes” and approx. mean value of (4.0) corresponds to “Usually”.

**Table 4.1 General Cause of Conflict in construction projects.**

	N	Mean	Std. Error	Std. Deviation	RII	Ranking
Inadequate communication among project teams	152	4.30	0.073	0.905	86	1
Ambiguous and contradicting instructions	152	4.24	0.089	1.092	85	2
Excessive change orders	152	4.11	0.089	1.099	82	3
Withheld or non-payments or disputes over payment	152	4.07	0.071	0.870	81	4
Delays in payments or (such as mobilization, part payment)	152	3.84	0.058	0.720	77	5
Delayed client response (decisions)	152	3.70	0.048	0.587	74	6

The use of substandard materials for construction	152	3.58	0.087	1.071	72	7
Different perception of work quality	152	3.51	0.056	0.690	70	8
Unrealistic time targets and durations	152	3.49	0.073	0.906	70	9
Project participants reluctant to deal promptly with changes and unexpected conditions - price escalation index.	152	3.32	0.091	1.118	66	10
Inadequate site investigations	152	3.29	0.073	0.896	66	11
Poorly developed project plan and scheduling.	152	3.18	0.067	0.825	64	12
Slow progress and performance by Contractor	152	2.90	0.053	0.649	58	13
Inaccurate design information	152	2.74	0.077	0.954	55	14
Contractor submits unrealistically low bid to win the project	152	2.71	0.089	1.096	54	15

Source: Field survey, 2015

Data collected was analyzed based on the responses of the participants. And for each item listed under general causes of conflict the mean values as well as the relative importance index (RII) for each item were rank to identify the highest cause of conflict in the construction of public buildings in the study area. According to the results in Table 4.1, four (4) items produced the highest range of mean scores term “usually” though when the mean values are approximated, the four items as obtained from the raw scores will increase from four(4) to nine (9). The second highest range of mean values were in the domain of “sometimes” and accounted for eight (8) items for a raw scores but when approximated will be reduced to three (3) items. The category of items that fell under the “occasional” per the raw score were very strong which when approximated moved to join items under the “sometimes” classification. This means the items listed under the general causes of conflict are very basic and predisposes construction of public buildings to conflict. And from the ranking the most regular cause of conflict in the Ashanti region was identified. Referring to the Table 4.1 three major items were discovered to be the most regular cause of conflict on the construction of public building in Ashanti Region by the participants. And they are; inadequate communication among project teams, ambiguous and contradicting instructions,

and excessive change orders. Inadequate communication among project teams with the highest mean value of 4.30 and a relative importance index ( $RII = 0.860$ ); meaning it is the highest causative item of conflict in the construction of public building projects in the Ashanti Region. In fact communication performs a very crucial role in all the stages of construction like in design, organization, production and management. The role of communication cannot be exaggerated or overstressed as various professionals in the construction industry need to communicate effectually in any particular project for it to be successful. And a poorly organized communication as confirmed by the responses does not only lead to misunderstanding and eventual conflict but also design and construction errors, demotivated labour force, a general slowdown and failure in production (Tipili et.al., 2014). The next in line according to the findings (Table 4.1) is ambiguous and contradicting instructions with a mean value of 4.24 and a relative importance index ( $RII = 0.850$ ), it is not surprising that instructions ambiguity and contradiction follows on the heels of inadequate communication, because the two items hinges on the absence of harmonious working environment. Ambiguous instructions may come in a form of design, written or oral. And it often creates disagreements as a result of the differing interpretations to the issued instruction and its true meaning. Disagreements between working drawings and specifications are classical examples of contradictory instructions and ambiguity. These contradictions in working documents results in conflicts between contractors and consultants, nominated contractors and main contractors.

The third cause of conflict according to the finding in Table 4.1 is excessive change orders with a mean value of 4.11 and a relative importance index ( $RII = 0.820$ ). As projects progresses there may be some findings on site that may require changes to the design that may not raise any eyebrow. However, contractors who request excessive changes may generate extraordinary expense, and they may do so in part because of design errors and to



cover their own bidding errors. But the Architect or Consultant who by these excessive requests is put in a position of not having done due diligence both in site investigation and in design will fight off the blame of errors; pointing probably to the contractor's bidding errors and any other that he/she might find a good defense. A consultant or an Architect may cause a project to be halted or delayed, with tardy approvals to change request because of obvious disagreement and conflict (Gardiner and Simmons, 1992). Delay in payments of certificates or withholding payment was the fourth most obvious cause of general conflict with a mean value of 4.07 and a relative importance index (RII= 0.810).

According to Table 4.1, the item with the least mean value is the item "Contractors submit unrealistic low bid to win the project" having a mean value of 2.71 and a relative importance index (RII=0.540), following after the item "Inaccurate design information" with a mean value of 2.74 and a relative importance index (RII=0.550). The mean values of the two items at the bottom of the items that causes general conflict means that, the two items per the responses of the participants are the least causative items among the list of causes of conflict as group under the General causes of conflict. Per the measure of the questionnaire they are significant to causing conflicts in the Ashanti Region though less likely than the causes before it on the list (Table 4.1)

#### **4.3.2 Contract-related Causes of conflict. Conflicts Emanating from Contracts**

Again from the questionnaire instrument that was used, 8 number items representing contract-related causes of conflict were used to elicit the opinions of the participants as to which of the items among the 8 items causes conflict very often in the construction of public buildings in the Ashanti Region. The "mean values" as obtained from the analysis of the responses of the participants in respect of Contract-related causes of conflict in the study area is as tabulated (Table 4.2). To measure contract-related causes of conflict, an eight (8)

item list were given participants to solicit their opinions on the regularity of happenings in the construction of building projects in Ashanti Region.

Again from the results, the respondents acknowledged that each of the items under contract-related causes of conflict, without doubt causes conflict in the construction of public building projects. The number of times a specific item or cause of conflict occurs in the Ashanti Region has been established and ranked. From the 5 point scale measure used in the questionnaire, three evolved, according to the mean values generated by the responses of the participants. The approximated mean values that evolved are as follows; approx. mean values of (2.0) correspond to “Occasionally” approx. mean value of (3.0) corresponds to “Sometimes” and approx. mean value of (4.0) corresponds to “Usually”.

**Table 4.2 Contract Related Causes of Conflict**

	N	Mean	Std. Error	Std. Deviation	RII	Ranking
<b>Unassigned risks associated with the project</b>	152	3.28	0.062	0.767	0.66	1
<b>Inadequate construction time or duration</b>	152	3.19	0.041	0.511	0.64	2
<b>Mismatched project risk allocation between stakeholders</b>	152	3.19	0.058	0.716	0.64	3
<b>Contract agreement unfair and lobsided in favour of the client</b>	152	3.01	0.085	1.042	0.60	4
<b>Changes of contract due to site and environmental condition</b>	152	2.87	0.050	0.616	0.57	5
<b>Contract does not fully address materials requirement</b>	152	2.63	0.070	0.859	0.53	6
<b>Contract is vague and impractical</b>	152	2.61	0.086	1.062	0.52	7
<b>Contract inapplicable to the type of project at hand</b>	152	2.30	0.089	1.103	0.46	8

Source: Field survey, 2015

Referring to the ranking from Table 4.2, four items stand tall among the eight (8) contract-related causes of conflict in the Ashanti Region. In the lead is “Unassigned risks associated with the project” with a mean value of 3.28 and a relative importance index (RII=0.66) meaning the item of “unassigned risk associated with projects” is the highest cause of contract-related conflict in the Ashanti Region. Contractors aim generally at making reasonable profit margin, but risks misallocation may derail their aim completely if their risk on the project are not well spelt out and assigned appropriately. Unassigned risks create a grey area, indeed an area of conflict between the client and the contractor. Very often Heath et al. (1994) submits that contract terms and conditions ordinarily tend to favor the client/buyer far more than the contractor.

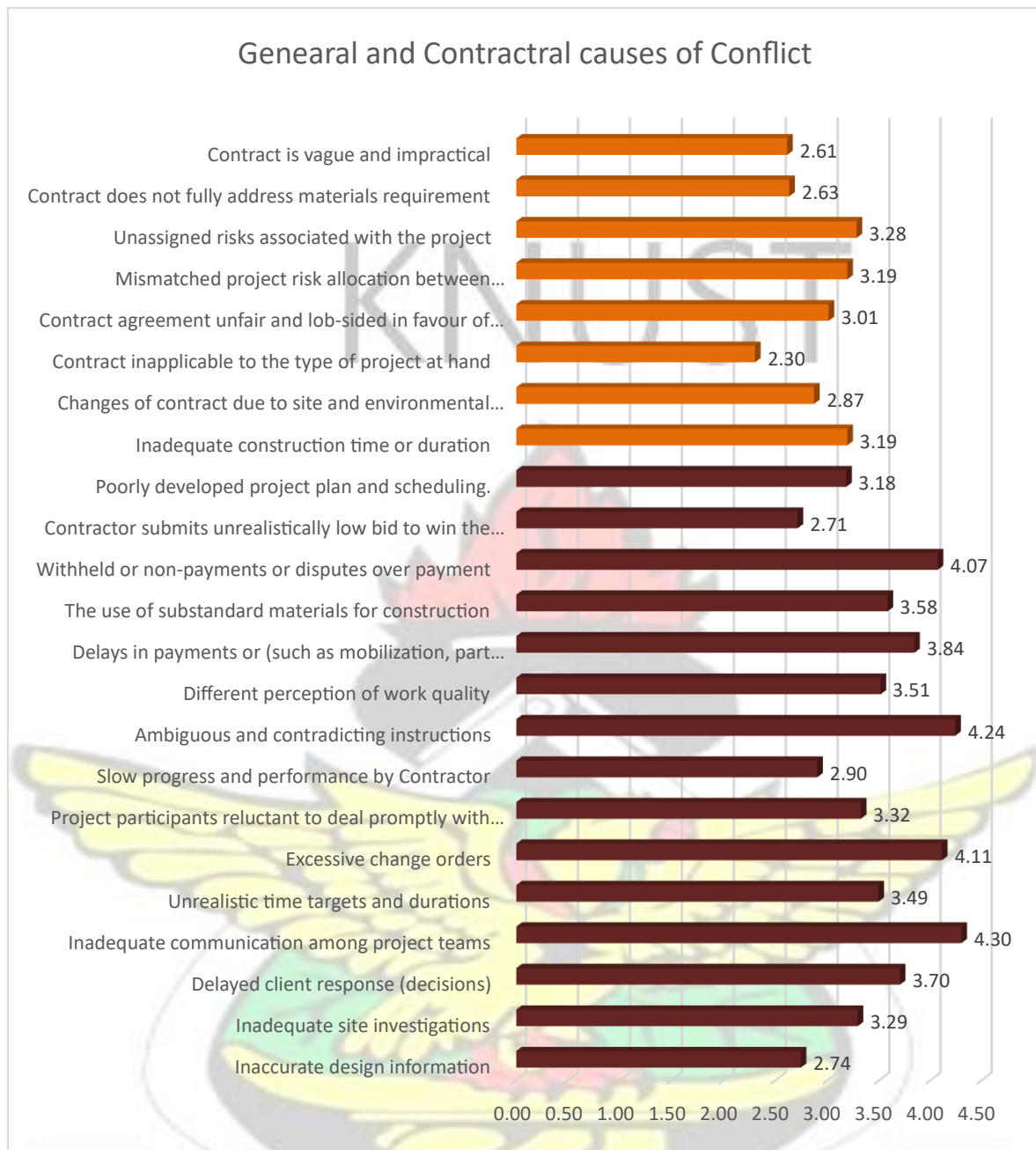
The second highest contract-related cause of conflict is “Inadequate construction time” with a mean value of 3.19 and a relative importance index (RII=0.64) and much the same way the “mismatched project risk allocation” between project stakeholders equally yielded a mean value of 3.19, and the same relative importance index as (RII=0.64). where the mean value or the relative importance index are the same, the standard deviation of both mean values are used. The least two items that are noted according to the responses to cause contract-related conflict in Ashanti Region are “Inapplicable contract” and “Vague and impractical contract” with mean values of 2.30 and 2.61 respectively. The item “Contract inapplicable to the type of project at hand” is one item under the contract-related causes of conflict that is highly polarized. Referring to the mean (2.30) and the standard deviation (1.103), which means the various positions on the item is very diverse, indeed one point away from the mean value. And what this means is that among the list of causes of contract-related conflict, “inapplicable contract” is the least significant cause of contract-related conflict in the Ashanti Region.

#### 4.3.3 Comparisons of General and Contract-Related Causes of Conflict

Construction project conflicts from the survey, are either caused by contract-related cause or by a general cause. The mean values as calculated from the survey responses are much higher for the General causes of conflict than the contract-related causes. The minimum mean value obtain from the General cause of conflict was 2.71, a value when compared with the mean values of the contract-related conflict values in rank would have been the fifth (5<sup>th</sup>) in rank. And the maximum mean value under the contract-related cause of conflict being 3.28, would be the twelfth (12<sup>th</sup>) mean in rank out of fifteen item rank under the General causes of conflict. This copiously or evidently shows the potency level of the two groups in regard to causes of conflict in the Ashanti Region. Is without doubt that the general causes of conflict generate more conflict than the contract-related cause, a position that runs contrary to Shapiro (2005) assertion that contract causes more conflict.

The position as espoused by the participants through this study again contradicts the position of Clegg (1992) that contracts are basic and obviously the main cause of conflict in the construction industry. The contrary situation as established by this study may probably be due to different study area and the culture and beliefs of participants in the Ashanti Region. A pictorial comparison is presented by figure 4.4, showing the calculated mean values of various items (both Contract-related and General) that causes conflict in the construction of public buildings in the Ashanti Region. From figure 4.4, the light-shade of brown represent contract-related causes while the dark brown represent general causes of conflict.





**Figure 4.4 Comparison of General and Conflict-related Causes of conflict Source: Field survey, 2015**

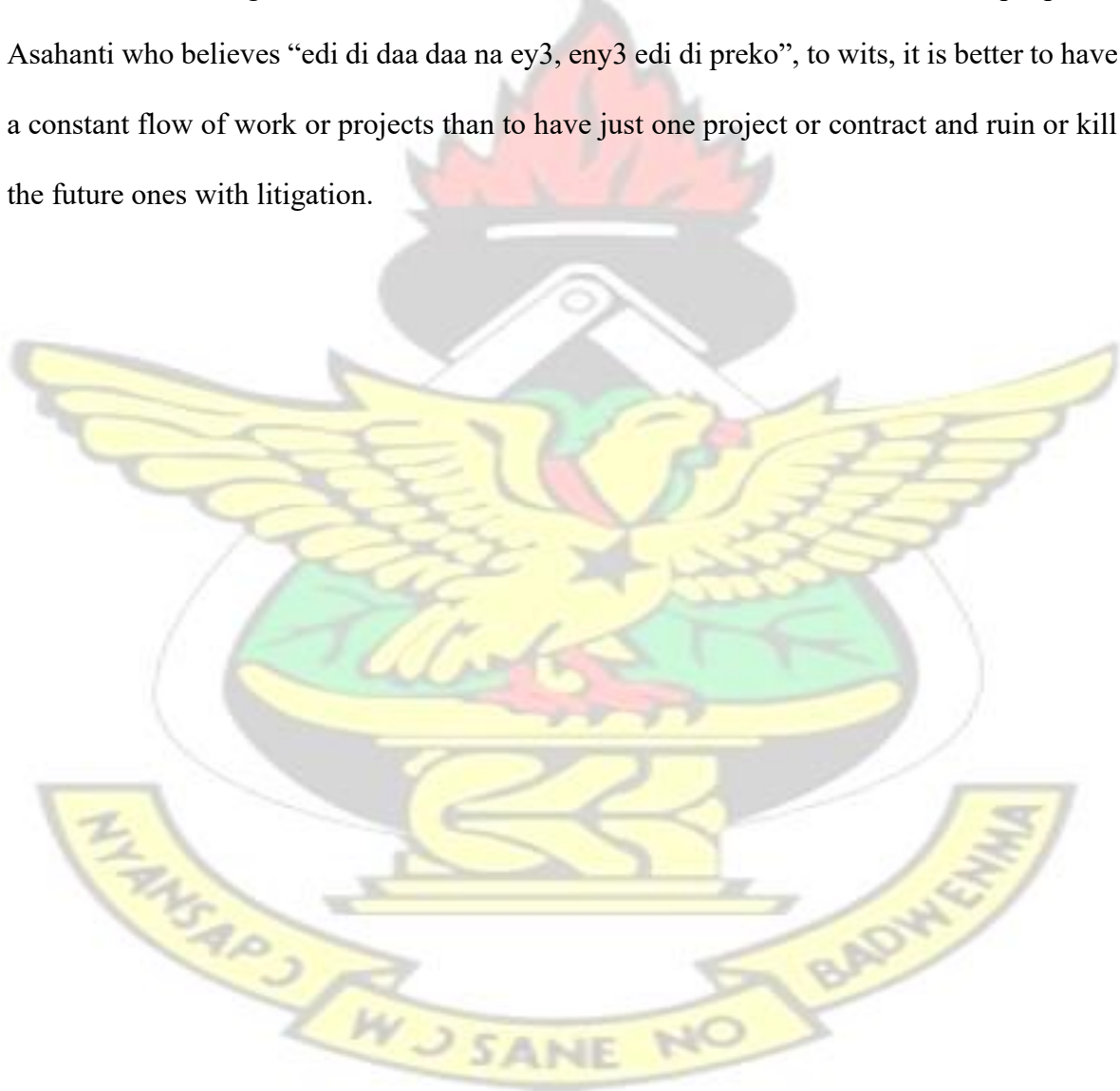
#### 4.4 Effect of conflict on construction projects

Festering conflict has over the years been detrimental to most firms and organizations with construction organizations and firms not spared. “A certain level of conflict in an organization or a firm is not only inevitable but desirable, for conflict is both a cause and effect of change” (McGivering, 1983). But when conflicts are handled haphazardly, it impacts negatively on both project success and the firms undertaking the project, in addition to the accompanying negative results. And to confirm the resultant adverse effects of conflict on construction projects in Ashanti Region, a twelve (12) number items were put to participants to rate. The items were measured on a five point scale; where 1- Not Ever, 2-Seldomly, 3-Occasionally, 4-Often, and 5-Each time. The measurement will be evaluated using the mean values, and the Relative Importance Index (RII). The relative importance index, as calculated will depict the effect of conflict causes in their magnitude.

From the ranking as contained in the Table 4.5, the most popular effect according to the participants of this study is „Delays in project completion“ with a mean value of 4.25 and a relative importance index (RII=0.850), a position that affirms the thoughts of Kumaraswamy (1997) and Colin et. al., (1996). The second most occurring and visible effect of conflict in the minds of the participants in construction is „Stays and ineffectiveness in construction“ with a mean value of 3.94 and a relative importance index (0.790). The third most occurring effect of conflict in the construction of building projects according to the participants is „Reduces productivity at site“ with a mean value of 3.67 and a relative importance index (0.730). And the fourth most occurring effect of conflict per the responses of the participants under this study is „Cost overrun“ with a mean of 3.64 and a relative importance index (0.730). However, „cost overrun“ according to the relative importance index (0.730) and its accompanying standard deviation (0.0582) as captured in

Table 4.5 is more popular and centrally located according to the participants than the third

popular effect of conflict, that is „Reduces productivity at site“. The two most unpopular effects of construction conflict are „Termination of contract“ and „Long standing litigation in court“ having mean values of 2.24 and 2.11 respectively. And a relative importance indexes of (0.45) and (0.42) respectively. It is therefore without doubt that the construction project participants in the Ashanti Region find litigation as the least of effect to a conflict situation during the construction of public projects. They would rather “jaw, jaw” to the solution than to litigate. It could also be as a result of a tolerant culture of the people of Asahanti who believes “edi di daa daa na ey3, eny3 edi di preko”, to wits, it is better to have a constant flow of work or projects than to have just one project or contract and ruin or kill the future ones with litigation.



**Table 4.3: Effects of Conflict on Construction Projects in Ashanti Region**

	N	Mean	Std. Error	Std. Deviation	RII %	Ranking
Delays in project completion	152	4.25	0.071	0.871	85	1
Stays and ineffectiveness in construction	152	3.94	0.058	0.721	79	2
Reduces productivity at site	152	3.67	0.076	0.933	73	3
Cost of overrun	152	3.64	0.047	0.582	73	4
The use of resource in respect of management time allocated to resolving conflict	152	3.63	0.047	0.585	73	5
Wasted funds on incomplete project	152	3.05	0.073	0.905	61	6
Damaged reputation of project team	152	3.01	0.063	0.78	60	7
Rework on the project	152	2.92	0.044	0.546	58	8
Weakened business relations between construction project teams	152	2.64	0.066	0.81	53	9
Loss or reduction of quality	152	2.31	0.052	0.643	46	10
Termination of contract	152	2.24	0.035	0.431	45	11
Long standing litigation in court	152	2.11	0.066	0.81	42	12

**Source: Field Survey, 2015**



#### 4.5 Conflict management styles used in construction project

Current literature presents five generally accepted ways of handling conflict in most organization including construction organizations. These methods were used in this research to determine the most frequently employed style in handling conflict in the Ashanti Region. Respondents were tasked to share which of the conflict management style he/she would use when confronted with a conflict situation. Using a 5-point Likert scale 1- Almost Never, 2- Occassionally, 3-Sometimes, 4-Almost Always.

**Table 4.4: Usage of Conflict Management Styles in Ashanti Region.**

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>RII</b>	<b>Ranking</b>
<b>Collaborating</b>	152	4.4	0.399	0.876	1
<b>Compromise</b>	152	3.8	0.405	0.758	2
<b>Accommodating</b>	152	3.0	0.672	0.549	3
<b>Avoiding</b>	152	2.7	0.615	0.549	4
<b>Competing</b>	152	2.1	0.616	0.413	5

**Source: Field survey, 2015**

The content of table above (Table 4.4) confirms the use of all the conflict management modes as well espoused in existing literature in settling conflicts in the construction of building projects in Ashanti Region. However, the level of usage or the regularity of use differs from one mode to another. According the Table 4.4, Collaborating mode of handling construction conflict was rank highest than the remaining four modes of settling construction conflict, especially in the study area as per the responses of the participants.

With the mean value of 4.4 and a relative index ( $RII=0.876$ ), the collaborating mode of managing conflict is the most popular according to the participants in the Ashanti Region.

Meaning, most of the conflicts that happens in construction of public buildings in Ashanti Region are settled using an equal measure of concern for self and concern for others, especially where integrative solutions are paramount. This method of managing conflict conforms to Thomas-Kilmann (2010) Conflict Mode Instrument (TKI). Rahim and Bonoma (1979) equally affirms this method as having merits in curing conflicts between team members in the construction of public building projects.

The second most popular style or mode of managing construction conflicts, according to the responses (Table 4.4) of participants is compromising. Compromising as a style by which conflict are resolved is favoured above the remaining three other methods or modes by project participants in the Ashanti Region. With the mean value of 3.8 and a relative importance index ( $RII=0.758$ ) is but second to only the collaborating mode according to the participants in the study area. Compromise according to Rahim and Bonoma (1979) is the mid ground between concern for self and concern for others.

But when a project participant in Ashanti Region cannot find enough grounds for Collaboration nor Compromise, he/she according to the study's responses will opt for the accommodating mode of bringing sanity into a construction conflict situation. And with a mean value of 3.0 and a relative importance index ( $RII=0.549$ ), the Accommodating mode or style of resolving conflict is the third most favoured conflict management style in the Ashanti Region.

The least popular method or mode of conflict management in the Ashanti region, according to the study responses is competing, this method in keeping with Rahim and

Bonoma (1979) is one which is based on the strategy of having a high concern for self and low cooperativeness with others. Having the smallest mean value of 2.1 and a relative importance index ( $RII=0.413$ ).

It is not surprising that the collaboration is popular in the study area, and compromise is not strange to them as well. The Ashanti Region is very rich in culture and tradition, and thus espouses traditional wisdom like “two Heads are better than one”, a statement that reinforces and explain their natural flow with collaboration. Participants in the study area believe strongly that when conflict ensue all stakeholders on the project must work in tandem with one another to a shared solution, where every concern and expectation have well been considered.

#### **4.6 The Link between the Causes of conflict, Effects and Conflict Management Strategies.**

Conflict as a cause and effect, must be managed in an apropos manner to either minimize its impact or effect or to enhance its impact on the organisation, especially when it is functional conflict. The link therefore between the cause, the effects, and the way they are both handle is significant to the project or the organisation undertaking the project. It is for this reason the study brings to the fore the link between the cause of conflict, its effects, and the apropos management style. And to help establish if there exist such link between the cause, the effects and the management style, a Spearman correlation analysis was used. Table 4.5 illustrate the results of the correlation analysis between the two types of conflict causes, the effects, and the apropos management styles to be applied.

The relationships as established in Table 4.5 are either negative or positive, significant or insignificant. From the analysis in Table 4.5 the competing style of managing conflict has absolutely no association with General causes of conflict but has a very significant negative

relation with both Contract-related causes and Effects of conflict. It thus mean therefore that when the Competing mode or style of managing conflict is used in regard to contract-related conflict in the study area, a reverse effect would rather be the end results. A result that is very significant and likely to impact heavily on the parties or the organisations involved. However, when a Compromising mode or style is used in regard to contract-related causes of conflict and effects of conflicts a significant positive correlation occurs, meaning compromising style when applied to contract-related conflict will certainly produce positive results or effects judging from the analysed responses of participants in the Ashanti Region. The Accommodating style when applied to General causes of conflict yielded a negative relation that is significant but a positive relation with both contract-related causes and effects, meaning the accommodating style will not be suitable in addressing general causes of conflicts according to the study participants but significantly important in resolving Contract-related causes that will equally yield positive effects. The Avoiding style though unpopular (according to previous analysis) have significantly positive relation with the General causes of conflict but an insignificant relation with both contract-related and effects of conflicts. Meaning the Avoiding style could successfully be used in resolving General causes of conflict. The Collaborating mode or style, the seemingly popular among the five (according to pervious analysis) has a very strong significant association with the General causes of conflict but a very weak relation with the Contract-related cause and effects of conflict. Surprisingly, the association between effects of conflicts and contract-related causes of conflict is highly significant than the association between General causes of conflict and effects of conflicts. This therefore means, according to the participant in the Ashanti Region, that the effect of contract-related conflict is much significant and goes to the core of the project than the effects of the General causes of conflict. Though according to the participants of this study, the General causes of conflict does cause more conflict than the



contract-related causes, in terms of effects, the Spearman correlation analysis using the responses of the participants" shows that Contract-related causes affect the project much more than the General causes of conflict.

### Spearman Correlation Analysis on the Causes, Effects and Management styles of conflict in construction project.

**Table 4.5 Spearman's rho-Correlations**

		causes of conflict	Contract conflict	Effect General on Project
Effect on Project	Correlation Coefficient	.173*	.645**	1.000
	Sig. (2-tailed)	.033	.000	
	N	152	152	152
Competing	Correlation Coefficient	.000	-.327**	-.713**
	Sig. (2-tailed)	.997	.000	.000
	N	152	152	152
Collaborating	Correlation Coefficient	.420**	.128	.132
	Sig. (2-tailed)	.000	.117	.105
	N	152	152	152
Compromise	Correlation Coefficient	.106	.563**	.542**
	Sig. (2-tailed)	.194	.000	.000
	N	152	152	152
Avoiding	Correlation Coefficient	.183*	-.032	.142
	Sig. (2-tailed)	.024	.700	.081
	N	152	152	152
Accommodating	Correlation Coefficient	-.291**	.256**	.279**
	Sig. (2-tailed)	.000	.001	.001
	N	152	152	152

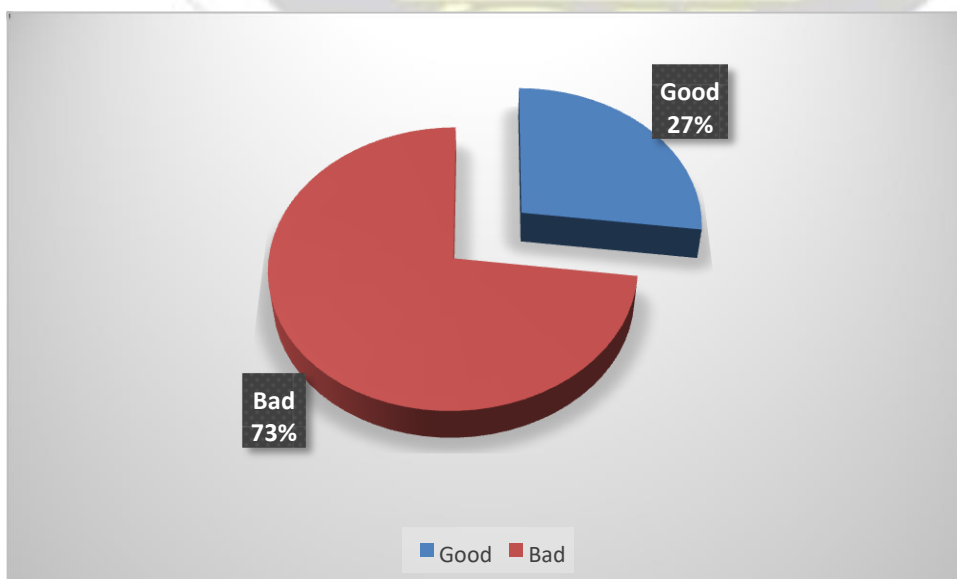
\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

**Source: Field survey, 2015.**

#### **4.6 Participants Perspective about Conflict.**

Conflict as seen by majority (75%) of the study participants follows the Traditional View, which perceives conflicts as bad, always coming with adverse impact, and culminates in decline in performance as well as project failures. They often associate conflict with violence, unreasonableness and devastation. In response the Traditional view suggest suppression, avoidance, and elimination (Verma, 1998).

But the management strategies of the study participants as seen from the analysis do not support the above assertion that those who deem conflict to be bad will of necessity opt to suppress or avoid the conflict. As loudly stated by the participants in this study, that though they may see conflict as bad in aggregate terms but believes there are better ways of solving conflicts that confront the project team members. Conflict management strategies like Collaborating, and Compromising among the five popular conflict management styles are the commonest strategies used in the Ashanti Region.



**Figure 4.6 Participants view of conflict in construction Source: Field Survey, 2015**

## **CHAPTER 5**

### **SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION**

#### **5.1 Introduction**

Conflict as inherit as it is in any human organization, is equally present in the construction industry and even more inevitable. Conflict may come with tension, illogicality and destruction when it's dysfunctional, but conflicts may also come with benefits such as new insights, curing groupthink, and can be used to stimulate performance. John Dewey puts it better that "conflict is like the gadfly of thought. It stirs us to observation and memory, it instigates invention. It shocks us out of sheep-like passivity and sets us at noting and contriving". The chapter puts forward significant findings from the study, and offers recommendation to lessen conflict effects and the management style used. The conclusions are then drawn from the adduced findings. The chapter is structured, based on the objectives of the research.

#### **5.2 Summary of findings**

In total the research focused on conflict; causes of conflict, effects of conflicts on construction projects and the way conflicts are managed when it occurs. The following are the wide-ranging results from the findings.

##### **5.2.1 Objective 1. Causes of conflict**

The causes of conflicts in the construct of public building projects in the Ashanti Region were divided into two categories, specifically General causes of conflict and Contractrelated causes of conflicts. The Contract-related conflict were assessed using eight (8) items

variables whereas the General causes of conflict were assessed using a fifteen (15) item variables. The outcome from the study shows that all the items measured were significant in causing conflict in the construction of public building projects in the Ashanti Region. But the rate of occurring were of course different for each item. Some were prevalent while some seldom causes conflict.

Of the fifteen (15) items assessed under the General causes of conflicts the outcome or finding proved that four (4) of the items assessed were major causes of construction conflicts in the Ashanti Region, and they are namely „inadequate communication among project teams“, „ambiguous and contradicting instructions“, „excessive change orders“, and „withheld or non-payment or dispute overpayment“. And under the same General causes of conflict, two of the items measured according to the findings came out as the least in terms of causing conflict. The two items are „inaccurate design information“ and „contractor submits unrealistically low bid to win the project“.

Inadequate communication among project teams or team members was found to be the number one cause of conflict in the Ashanti Region. The construction industry is among the most fragmented industries anyone can find, and in such environment communication is key and fundamental for any effective delivery of goals. Therefore, the necessity for construction team members to communicate among themselves through the stages of the work is absolutely inevitable. For construction is about communication, and communication not just from one person but every member of the construction team. This means that, communication is an integral part or an indivisible part of construction. The Architect designs and gives to the contractor and he interpret the designs into beams and columns, windows and doors. The quantity Surveyor looks at the same design and put a cost to it. This is a classic example of the communication that happens in the construction of public building



projects. It is thus said that the extent of work is communicated by way of drawings, specifications, method statements, conditions of contract, and schedules.

Inadequate communication against the backdrop of the need or the inevitable necessity to communicate among team members will certainly result in project failure. Inadequate communication among team members is sure to result in confusion, misunderstanding, misperception and ultimately chaos at the project site. Misreading of design drawings, failure to effect change orders, misunderstood instructions, and delay in the supply of critical material to the project site are all as a result of inadequate communication. The sum total of the above stated situation more often than not culminates in conflict.

The second highest cause of conflict from the findings is the ambiguity and contradicting instructions. Instructions in the construction industry are key and basic to the happenings around any given project. Ambiguities often occur between various working drawings, between the working drawings and specifications, and between the architect's instruction and that of the structural engineer. When these ambiguities and contradictions surface and team members are not humble enough to accept responsibility for the errors, adopted positions are taken and finger-pointing begins, conflict eventually results.

The third most occurring cause of conflict according to the findings is „excessive change orders“. An arrangement that allows any member of the project team to suggest and make changes to any aspect of a project would be disastrous, much the same way, if there exist an arrangement that prevent the contemplation of any change could also result in a project that might be unsuitable for the purpose for which the client wants the project. Contractors often generate change orders mainly as a result of design errors, and when these changes become excessive, signifying the design were not well thought through or shabbily done, obviously put the Architect in a position to protect his professional integrity by opposing the change

request or delay approval to these request. The opposition to these request often brews tension between the contractor and the consultant leading to conflict situations in the

Ashanti Region.

Another item that is equally guilty of causing construction conflict in the Ashanti Region from the findings is „withheld payments or non-payment“. Money it is said “makes the world go round” including the construction industry. Contractors very often depends on bank facilities and loans to carry out the contract works they bids. As such their cash flows are often strictly link to a repayment plan agreed with their bankers prior to the commencement of these projects. It therefore becomes offensively problematic according to the findings of this study, when for one reason or the other the client (Ministries,

Departments, and Local Assemblies) decide to delay on payment or withhold payment. This situation puts contractors undertaking public projects under severe pressure, as they are faced with liquidity problems. This invariably generate conflict between the contractor and the client, leading often to the abandonment of the project sites. The abandonment of site by the contractors in many cases also leads to another conflict with the would-be users of the project when completed. A tripartite conflict situation is finally generated between the state/client, the contractor and the would-be users in the Ashanti Region.

In much the same way is the issue of “delayed payment of mobilization” which is fifth in rank of causes of conflict from the findings of the study. Mobilization of contractors is to enable them mobilize their work force both labour, plant and other necessities as may be required by the works involve. In financial terms it gives the contractor the comfort of starting the work without have to procure a loan from the bank. In this wise the contractor’s cash flow start in the positive unlike when he/she has to go for a loan. The delayed payment of a promised mobilization is often frustrating and negatively impact on most public construction building schedules and completion time. And conflict situation often generate

usually, when delayed mobilizations are lately paid and schedule time and completion time are insisted by the client to remain unchanged.

But in a weak ranked position is the item “contractor submit unrealistically low bid to win projects”. This may be rightly so in the Ashanti Region because client’s Quantity Surveyors might have up their game in picking out bids that cannot eventually be able to bring the project to its completion. So unrealistically low bids do not often win bids and when they do, the project drawing which have been thoroughly checked is adhere to “sensu stricto” to stay the hand of the contractor from smuggling in additions through change orders.

And with respect to contract-related causes of conflict in the Ashanti Region, the findings put forward “unassigned risks associated with the project” as the highest cause of conflict contract-wise. The issue of risk and the owner of a particular risk is paramount in the construction of public buildings. For purposes of mitigating and possible transfer of risks associated with construction works, it is critical that after identification risks are accordingly assigned either to the client or to the constructing parties, that is, the main contractor, domestic sub-contractors and nominated sub-contractors.

But where a particular risk is neither assigned to the client nor any member of the constructing parties according to the findings in this study is a major cause of conflict in the Ashanti Region. Damage to adjoining properties around a particular public construction site should either be picked up by the client or the constructing parties, and if such risk is unassigned, and should any damage occur to any property around the site, passing the butt will start and conflict will surely follow.

Immediately following in rank of contract-related causes of conflict in the study area from the findings is the item “inadequate construction time or duration”. Time is of essence in construction of any kind because of price fluctuations and price increases which ultimately



after the final cost of projects. But when politically motivated timelines are given contractors instead of appropriate construction best practice timelines quality suffers, and any good contractor worth his name will insist on doing the right thing to the dismay of the Politician whose ignorant timeline might not be feasible should quality be upheld. In situations such as above, the Politician sees the contractor as a saboteur and conflict ensues.

Again the least contract-related cause of conflict according to the findings in Ashanti is “contract inapplicable to the type of project at hand”. It was one of the items that participants were very divided on as evidenced ( $SD=1.103$  and a  $Mean=2.30$ ). Generally meaning that when it occurs yes, it may induce conflict but it rarely happens according to the findings. It does mean again those contracts executed in the Ashanti Region are appropriately applicable to the projects undertaken in the study area.

**5.2.2 Objective 2. Conflict effects on construction of public building projects.** The impact of conflict can be felt in two different ways in the construction of public building projects namely negative and positive effects. The study’s focus was on the negative effects of construction conflicts. And from the findings of the study a list of twelve (12) number effects were ascertained to be the very outcomes of construction conflict in the construction of public building projects. And chiefly among these effects are; delays in project completion, stays and ineffectiveness in construction, reduced productivity at site, cost overrun, the use of resource in respect of management time allocated to resolving conflict, wasted funds on incomplete project, and damaged reputation of project team respectively.

The ascertained effects of construction conflicts based on the findings of the study do not occur independent or exclusive of each other or in isolation, but happens or occurs in tandem with one another as the project enters into conflict situation. It was again realized based on the findings of the study that all the effects as ascertained affect the project itself and not the



members of the construction team membership, except “damage reputation” and long standing litigation. The study has indeed confirm that in Ashanti long standing litigation is the lowest ranked effect, meaning, no matter how widely encompassing a particular conflict may be it does not lead to long standing litigation.

### **5.2.3 Objective 3. Conflict Management Strategies used in Construction of Public Building Projects in Ashanti Region.**

Existing literature recognizes and accept five modes of dealing with conflicts in most organizations. And these modes or strategies have been confirmed by the findings of this study as strategies that are used in dealing with conflict situations in the construction of public buildings in the Ashanti Region. But the usage, according to the findings were centered on collaborating mode/style and the compromising mode/style. Indeed, the players in the construction of public building projects in the Ashanti Region per the study prefer to collaborate and compromise in finding a solution to conflicts that may arise in the course of their work than to employ the remaining three (3) modes/style namely the accommodating style, the avoiding style and the competing style. However, where the accommodating style or the avoiding style have been deemed to produce results, parties do not shy away from using them as confirmed by the study. But the competing mode because of its backlash effect according to the study is rarely used or employed in any conflict situation in the study area.

### **5.2.4 Participants view about Conflicts in Construction.**

Based on the findings, an overwhelming majority of participants (75%) affirmed that conflicts in construction is bad and must be managed so as not to upset the success of the entire project. But the minority few of the participant (25%) felt conflict in the construction

industry is good when properly managed. For them conflicts in the construction of public building projects especially in the Ashanti Region helps cure groupthink within the project team. And again, helps in stimulating and provoking new ideas.

### **5.3 Recommendations**

The following recommendations are suggested to mitigate the causes of construction conflicts in the construction of public building projects in the Ashanti Region.

Every project start and ends with communication, therefore communication is the life wire of all construction projects including public building projects. Communication from a superior to a subordinate, subordinate to a superior, and communication between peers or colleagues does happen in construction projects teams. And it is critical that a system or a method is put in place to facilitate and to enhance a smooth transmittance of information from one individual to another within the project team. And to cure the problem of inadequate communication or the lack of information spread, it is the suggestion of this study to institute communication strategies like Team Meeting Discussions, Site Review Meetings, and Project Status Reporting. These meeting opportunities enables and helps members within the team to apprise themselves fully of the happenings around the project and be fully informed.

And on all these platforms members within the team will be giving and receiving information on the project, and the problem of inadequacy of communication is comprehensively cured.

Besides, the information that is shared should be doubly checked to authenticate its veracity to avoid ambiguities and contradictory instructions been issued. Since poor and inaccurate information pass on or conveyed does affect work performance onsite.

Design teams on public building projects should painstakingly check and recheck their design works before sending it out as a finished drawings for implementation at site. Junior design team members should not be left unsupervised on final works of designs to avoid excessive change orders. Again, detailed and much attention should be given to site investigation work prior to the start of the design works, in order not to miss any fact that may eventually result in excessive change orders.

Payment of contractors should be done timeously to avoid project abandonment and where there exist disagreement in respect of works executed, certificate value should be paid while the disputed extra works are been looked at.

Risks associated with any public building project should be well identified and correctly assigned to avoid hanging risks which are neither assigned to the client nor the constructing team members.

Adequate time and duration should be allowed contractors to deliver work up to the standard required. Project duration should be realistically planned and properly allotted.

When contractors are given “political” timelines to finish projects which otherwise would have taken rightly a much longer time to finish, quality and durability suffers. And contractor’s work method statement should be given careful consideration because it does represent the contractors understanding of how long or short the project will take to complete, more especially when the contractor is a known experienced hand in the project area.

## 5.4 Conclusion

As inevitable as change, is the issue of conflict in construction. At any project site where project team members work together in the course of completing their work and obligations, there exist always an obvious possibility of conflict. Indeed, it is absolutely and completely impossible to have people of different experience, training and upbringing work together, decide on issues and work towards project objectives and goals without conflict.

Plethora of literature have put forward several causes of conflict as pertain to the construction industry. And to ascertain the causes of construction-related conflicts in the Ashanti Region a number of items were selected and employed. The conflict causing items were divided into two main groups, that is, Contract-related causes and General causes. It was thus affirmed from the findings that the General causes were the frequent causes of conflict in the construction of public building projects than the Contract-related causes.

However, a correlation analysis performed proved that, though the General causes of conflict every so often causes conflict in the construction of public building projects, the effects of such conflicts were not so significant compared to the significance level of the Contract-related causes of conflict in the Ashanti Region.

The outcome of the study partially agrees and confirms assertions by some existing literature while contesting others. The study research findings contradicts the claim by Clegg (1992) and Shapiro (2005) that contract is the principal cause of conflict. Contracts according to the findings rarely causes conflict however, the effect when it does is very significant than the regular General causes of conflict in the Ashanti Region.

The study again recognizes inadequate communication as a major cause of conflict and this is in agreement with Tipili et. al., (2014) claim that poor communication often result in



project delays, cost overruns and project abandonment. This is similar to majority of research finding that communication hindrances is one of the major causes of conflict (Ogunbayo, 2013; Cheung and Yui, 2006).

Again, the study identifies ambiguous and contradicting instructions as one of the causes of construction conflicts. And this agrees with, or is compactible or consistent with the assertion that ambiguity creates conflict (Acharya and Lee, 2006).

And between the different management styles of managing conflict in construction found in literature, collaborating and the compromising styles are the most favored conflict management style used by players in the construction industry in Ashanti Region per the study.



## REFERENCES

- Acharya, N., Lee, Y. and Im, H. (2006) Conflicting factors in construction projects: Korean perspective, *Engineering Construction and Architectural Management*, vol. 13(6) p.543-566.
- Amason, A. C., and Schweiger, D. M. (1997). The effects of conflict on strategic decision making effectiveness and organizational performance. In De Dreu, C. K. W. & Van de Vliert, E. (Eds.), *Using conflict in organizations* (pp. 101–115). Thousand Oaks, CA: Sage.
- Anderson Jr., L. L. and Polkinghorn, B. (2008), Managing conflict in construction megaprojects: leadership and third-party principles, *Conflict Resolution Quarterly*, Vol. 26(2), p. 167-198.
- Ankrah, N. and Langford, D. (2005) Architects and Contractors: A comparative study of organizational cultures. *Construction Management and Economics*, Vol. 23(6), London, UK, E. & F.N. 595
- Assaf, S., Al-Khaliil, M., Al-Hazmi, M. (1995) Causes of delay in Large Building construction projects, *Journal of Management in Engineering*, vol. 11(2) p. 45-50.
- Atreyi, K., T., Bernard, et al. (2007). "Conflict and performance in global virtual teams." *Journal of Management Information Systems* Vol. 23(3), p. 237-274.
- Bagshaw, M. (1998) Conflict management and mediation; key leadership skills for the millennium, *Industrial and Commercial Training*, vol. 30(8).
- Ban, C. (1995), Conflicts in Organisations. In R. K. T. Yu and M. Leung (2001) Investigation of construction conflict Resolution in Hong Kong, 17<sup>th</sup> Annual ARCOM Conference University of Salford, vol. 1.
- Baron, J. (1997). *Organizational Behaviour and Human Decision Process: Protected Values*, vol. 70, p. 1-6
- Blake Dawson Waldron (2006) Scope for improvement a survey of pressure points in Australian construction and infrastructure projects, Australian Constructors Association.
- Blake, R. R. and Mouton, J. S. (1970), The Fifth Achievement. *Journal of Applied Behavioral Science*, Vol. 6, p. 413-426.
- Borvon, I. N. A. (2011) Common disputes related to public work projects in Thailand. In O. T. Femi ( 2014) Causes and Effects of conflict in the Nigerian Construction Industry. *International Journal of Technology Enhancement and Engineering Research*, vol. 2(6).

- Carte, T. and Chidambaram, L. (2004) A Capabilities-Based Theory of Technology Deployment in Diverse Teams; leapfrogging the pitfalls of diversity and leveraging its potential with collaborative technology, *Journal of Association for Information Systems*, vol. 5 p. 11-12.
- Cheng, C. (1998), Psychometric properties of the social-conflict scales for Chinese Adolescents, *Journal of Social Psychology*, Vol. 138(2), p. 211-216.
- Cheung, S. and Yiu, T. (2006) Are construction disputes inevitable? *IEE Transactions on Engineering Management*, Vol. 53(3), p. 456-470.
- Cheung, S., Yiu, T. and Yeung, S. (2006) A study of styles and outcomes in construction dispute negotiation, *Journal of Construction Engineering and Management*, Vol. 132(8), p. 805-813.
- Chong, S. (2011), Conflict management, accessed from [www.knol.google.com/k/conflict management](http://www.knol.google.com/k/conflict-management) on 2<sup>nd</sup> May, 2015.
- Clegg, S. R. (1992), Contracts causes conflicts, in P. Fenn and R. Gameson (eds), *Construction conflict management and resolution*, p. 143-160, London, E & FN SPON: An Imprint of Chapman & Hall.
- Colin, J., Langford, D. and Kennedy, P. (1996), The relationship between construction procurement strategies and construction contract disputes. CIB W92, North Meets South, Durban, South Africa.
- Colledge, B. (2005) Relational contracting- creating value beyond the project. *Lean Construction Journal*, vol. 2(1) p. 30-45
- Crossin, C. and Banfield, J. (2006), Conflict and project finance: exploring options for better management of conflict risk, Background paper, *International Alert*.
- Dada, M. O. (2013) Conflicts in construction projects procured under traditional and integrated systems: A correlation analysis, *International Journal of Construction Supply Chain Management*, vol. 3(1) p.1-15.
- Dahrendorf, R. (2007). *The modern social conflict: The politics of liberty*, 2<sup>nd</sup> Ed. New Jersey: Transaction Publishers.
- Darling, J. R. and Walker, W. E. (2001). Effective conflict management: use of behavioural style model, *Leadership & Organisation Development Journal*, vol. 22(5) p. 225-242.
- Deetz, S. A. and Stevenson, S. L. (1986), *Managing interpersonal communication*. New York: Harper and ROW, 1986.

- Deutsch, M. (1973). *The Resolution of Conflict: Constructive and Destructive Processes*. New Haven and London, Yale University Press.
- Easterby-Smith, M., Thorpe, R. and Jackson, P. (2008), *Management Research*, 3rd ed, SAGE Publications Ltd., London.
- Emmitt, S. and Gorse, C. (2003) *Construction communication* Blackwell Publishing Ltd.
- Esquivel, A. (1997). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, Vol. 44, p. 350-383.
- Femi, O. T (2014) Causes and Effects of conflict in the Nigerian Construction Industry. *International Journal of Technology Enhancements and Emerging Engineering Research*, vol. 2(6).
- Fenn, P, Lowe, D and Speck, S. (1997), Conflict and Dispute in Construction. *Construction Management and Economics*. Vol. 15, p. 513-518.
- Follett, M.P. (1940). Constructive conflict. In H.C. Metcalf and L. Urwick (Eds.), *Dynamic Administration: The collected papers of Mary Parker Follet* (pp. 1-20), New York: Harper.
- Gale, A. W. (1994) Women in construction: An investigation into some aspects of image and knowledge as determinants of the under representation of women in construction management in the British Construction Industry, PhD thesis, University of Bath.
- Gardener, P. and Simmons, J. (1995) Case exploration in construction conflict management, *Construction Management and Economics*, Vol. 13(3), p. 219-234.
- Gorse, C. A. (2002) Effective interpersonal communication and group interaction during construction management and design team meetings. Unpublished PhD thesis, School of Management, Faculty of Social Sciences, University of Leicester.
- Gould, N., Capper, P., Dixon, G. and Cohen, M. (1999) *Dispute Resolution in the Construction Industry*, London: Thomas Telford, Limited.
- Green, B., Leslie, A. D., and Marks, M. (2001) Maximizing the benefits of task conflict: The role of conflict management, *International Journal of Conflict Management*, vol. 12(1) p. 4-22.
- Harding, S. (1991) *Whose Science? Whose knowledge? Thinking from women's lives*. New York: Cornell University Press.



- Harmon, K. M. J. (2003) Resolution of Construction Disputes: A review of current methodologies, ASCE Journal Leadership and Management in Engineering, vol. 3(4), p. 187-201.
- Harmon, J., et al (2005). *Diverging Paths: What future for export credit agencies in development finance?* (World Resources Institute). [www.wri.org](http://www.wri.org) accessed on 15<sup>th</sup> June, 2015.
- Heath, B., Hills, B. and Berry, M. (1994) The origin of conflict within the construction process, Publication 171, First Plenary Meeting of TG15, The Netherlands.
- Hellard, R. B. (1988). *Managing Construction Conflict*, England: Longman Group UK Limited.
- Hellard, R. (1995) *Project partnering: principle and practice*. Thomas Telford, London.
- Hellriegel, D., Slocum, J. W. Jr. and Woodman, R. W. (1995) *Organizational Behaviour*, 7<sup>th</sup> Ed., West Publishing Co. New York, NY.
- Higgerson, M. L. (1996), "Managing Conflict." In *Communication Skills for Department Chairs*. Bolton, MA: Anker Publishing, Inc., 1996. American Council on Education accessed from [www.acenet.edu/resources/chairs/](http://www.acenet.edu/resources/chairs/) on 15<sup>th</sup> June, 2015.
- Hocker, J. L. and Wilmot, W. W. (1985), *Interpersonal conflict*. Dubuque, Iowa: Wm. C. Brown Publishers.
- Hughes, W. (1994) Improving the relationship between construction law and construction management., in TG15 *Construction Conflict: Management and Resolution*.
- Hussey, J. and Hussey, R. (1997), *Business Research. A Practical Guide for Undergraduate and Postgraduate Students*, Palgrave: Basingstoke.
- Jarvenpaa, S. L., T. R. Shaw, et al. (2004). "Toward contextualized theories of trust: The role of trust in global virtual teams." *Information Systems Research*, Vol. 15(3), p. 250-267.
- Jehn, K. (1997). Affective and cognitive conflict in work groups: Increasing performance through value-based intragroup conflict. In C. De Dreu & E. Van De Vliert (Eds.), *Using conflict in organizations* (pp. 87–101). London: Sage.
- Kassab, M., Hegazy, T. and Hipel, K. (2010) Compromised DSS for construction conflict and resolution uncertainty, *Journal of Construction Engineering and Management*, vol. 136(12) p. 1249-1257

- Khanaki, H. and Hassanzadeh, N. (2010), Conflict management styles: The Iranian General Preference Compared to the Swedish. *International Journal of Innovation, Management and Technology*, Vol. 1(4), p. 419-426.
- Killian, J. (2003) A forensic analysis of construction litigation, US Naval Facilities Engineering Command, unpublished Master's thesis, Texas University of Auston, Auston, TX.
- Kreicie, R. V. and Morgan, D. W. (1970), Determining sample size for research activities, *Educational and Psychological Measurement*, Vol. 30, p. 607-610.
- Kumaraswamy, M. (1997) Common categories and causes of construction claims, *Construction Law Journal*, Vol. 13(1), p. 21-34.
- Kumaraswamy, M., Love, P., Dulaimi, M. and Rahman, M. (2004) Integrating procurement and operational innovations for construction industry development, *Engineering, Construction and Architectural Management*, Vol. 11(5), p. 323-334.
- Langford, D. and Murray, M. (2008) Procurement in the context of commercial management. In Commercial management of projects, defining the discipline (Lowe, D. and Leiringe, R. (ed.)) Blackwell Publishing, Oxford, p. 72-92.
- Langford, et. al., (1992) Contingency managemet of conflict; analysis and solution. In P. Fenn and R. Gameson (eds.). Construction conflict management and resolution. London; E & FN SPON, p.64-71.
- Latham, M. (1994) Constructing the team, HMSO, London.
- Lee, K. L. (2008) Superior-subordinate conflict management styles: An empirical study of Malaysian companies, *International Business Research*, vol. 1, p. 188-130.
- Lee, K. L. (2011), An Examination between the Relationships of Conflict Management Styles and Employees' Satisfaction, *International Journal of Business and Management*, Vol.3 (9), p. 11-25.
- Leung, M.-y., Liu, A. and Ng, S. (2005) Is there a relationship between construction conflicts and participant's satisfaction, *Engineering Construction and Architectural Management*, vol. 12(2) p. 140-167.
- Li, T. H. Y., Ng, S. T., and Skitmore, M. (2012) Conflict or consensus: An investigation of stakeholders concern during the participation process of major infrastructure and construction projects in Hong Kong. *Habitat International*, vol. 36, p. 333- 342.

- Liu, C. (2002) A comparism of job stressors and job strains among employees holding comparable jobs in Western and Eastern societies. Unpublished Doctoral dissertation, University of South Florida, Tempa.
- Mason, R. D., Marchal, W. G. and Lind, D. A. (1999), *Statistical Techniques in Business and Economics*, 10<sup>th</sup> ed, McGraw Hill, New York, NY.
- Matz, E. and Kohli, A, (2000) Reducing marketing's conflicts with other functions: the differential effects of integrating mechanisms Journal of the Academy of Marketing Science, vol. 28(4) p. 479-492.
- Mba, O. A. (2013) Conflict management and employees performance in Julius Berger Nigeria PLC, Bonny Island, Journal of Human Resource Management and Labour studies, vol. 1(1), p. 34-45.
- McGivering, I. C (1983) Conflict. In a Handbook of Management (Ed. T. Kemper), p. 9495. Penguin Books Ltd, Harmondsworth.
- Menon, A., Bharadwaj, S. G. and Howell, R. (1996) the quality and effectiveness of marketing strategy: Effects of functional and dysfunctional conflict in intraorganizational relationships. Journal of the Academy of Marketing Science, vol. 24(4).
- Mgbekem, S. J. (2004) Management of University of Education in Nigeria, Calabar; University of Calabar Press.
- Murray, M., Landford, D., Hardcastel, C., and Tookey, J. (1999) Organizational design. In O. T. Femi (2014) Causes and Effects of conflict in the Nigerian Construction Industry, International Journal of Technology Enhancement and Emerging Engineering Research, vol. 2(6).
- Nasir, S. G. S. S., and Khamidi, B. M. F. (2013) Propects of building information modeling (BIM) in Malaysian Construction Industry as conflict resolution tools, Journal of Energy Technologies and Policies, vol. 3(11) p. 346-350
- Neuman, L. W. (2007), *Basics of Social Research: Qualitative and Quantitative Approaches*, 2<sup>nd</sup> ed, Pearson Education, Inc., Boston.
- Newey, J. (1992), The construction industry, in P. Fenn and R. Gameson (eds), Construction conflict management and resolution, p. 143-160, London, E & FN SPON: An Imprint of Chapman & Hall.
- Newcombe, R. (1996) Empowering the construction project teams: Internatinal Journal of Project Management, vol. 14(2).



- Ndekugri, I. E. and Rycroft, M. E. (2000) JCT 98 Building Contract: Law and Administration, London: Arnold.
- Ng, H. S., Pena-mora, F. and Tamaki, T. (2007) Dynamic conflict management in largescale design and construction projects, *Journal of Management in Engineering*, vol. 23(2), p. 252-266.
- Ogunbayo, O. (2013), Conflict management in Nigerian construction industry: project managers' view, *Journal of Emerging Trends in Economics and Management Sciences*, Vol. 4(2), p. 140-146.
- Price, A and Chalal, K. (2006) A strategic framework for management, *Construction Management and Economics*, vol. 24(3).
- Rahim, M.A. (1986). Referent Role and Styles of Handling Interpersonal Conflict. *Journal of Social Psychology*, Vol. 126, p. 79-86.
- Rahim, M.A. (1992). Managing conflict in organizations. (2<sup>nd</sup> ed) New York: Praeger.
- Rahim, M.A. and Bonoma, T.V, (1979). Managing organizational conflict: A model for diagnosis and intervention, *Psychological Reports*, Vol. 44, p. 1323-1344.
- Rhys Jones, S. (1994) How constructive is construction law? *Construction Law Journal*, Vol. 10(1), p. 28-38.
- Rosenhead, J. (2006) Past, Present and Future of problem structuring methods, *Journal of the Operational Research Society*, vol. 57(7), p. 759-765.
- Saad, M., Jones, M. and James, P. (2002) A review of progress towards the adoption of supply chain management in construction, *European Journal of Purchasing and Supply Management*, vol. 87(2) p. 60-64.
- Saunders, M., Lewis, P. and Thornhill, A. (2007), *Research Methods for Business Students*, (4<sup>th</sup> ed), Harlow, Prentice Hall Financial Times.
- Shapiro, B. (2005), Inherent conflicts in the construction industry and the structure of contracts, *Fundamentals of Construction Contracts: Understanding the Issues conference*, Lorman Education Services, Vancouver, BC.
- Simons, H. A. (1972) Theories of Bounded Rationality. In C.B. McGuine & R. Radner (Eds.), *Decision and Organization*. A volume in honour of Jacob Marschak, NorthHolland, Amsterdam.
- Smith, K. A. (2002). *Conflict Management*, McGraw-Hills, Best Series- Basic Engineering Series and Tools.



- Smith, W. P. (1987), Conflict and Negotiation: Trends and Emerging Issues. *Journal of Applied Social Psychology*, Vol.17, p. 641-677.
- Tashi, S. and Peansupap, V. (2013) Review of conflict issues of public construction projects in Bhutan, 18<sup>th</sup> National Convention on Civil Engineering, The Empress hotel, Chiang Mai, Thailand.
- Thomas, K.W. and Kilmann, R.H. (2010). *The Thomas-Kilmann Conflict MODE Instrument*. Interpretive Report. Tuxedo, NY: Xicom.
- Thomas, K.W. and Schmidt, W.H. (1976). A Survey of managerial interests with respect to Conflict, *Academy of Management Journal*, Vol. 19, p. 315-318.
- Tipili, L., Ojeba, P. Sa adiya Liyasu M. (2014) Evaluating the effects of communication in construction project delivery in Nigeria, *Global Journal of Environmental Science and Technology*, vol. 2(5).
- Tjosvold, D. (1997). Conflict within interdependence: Its value for productivity and individuality. In C. K. W. De Dreu & E. Van de Vliert (Eds.), *Using conflict in organizations* (pp. 23–37). Thousand Oaks, CA: Sage.
- Tjosvold, D. (2006). Defining conflict and making choices about its management: Lighting the dark side of organizational life. *International Journal of Conflict Management*, Vol. 17(2), 87–96.
- Tazelaar, F. & Snijder, C. (2010) Dispute resolution and litigation in the construction industry. Evidence on conflicts and conflict resolution in The Netherlands and Germany, *Journal of Purchasing and Supply Management*, vol.16 (4), p. 221-229.
- Uline, C. L., Tschannen-Moran, M. and Perez, L. (2003), Constructive Conflict: How Controversy Can Contribute to School Improvement, *Teachers College Record*, Vol. 105 (5): p. 782–816.
- Verma, V. K. (1998). Conflict Management, The Project Management Institute Project Management Handbook, Ed Jeffrey Pinto.
- Wall, J.A. and Callister, R.R. (1995). Conflict and Its Management. *Journal of Management*, Vol. 21(3), p. 515-558.
- Yiu, T. W. and Cheung, S., (2007) Behavioral transition: A framework for construction conflicts – tension relationships, *IEEE Transaction on Engineering Management*, vol. 54(3) p. 498-505.

- Yiu, K. and Cheung, S, (2006) A catastrophe model of construction conflict behavior. *Building and Environment*, vol. 41(4), p. 438-447.
- Yu, R K T and Leung, M-y (2001) Investigation of construction conflict resolution in Hong Kong. *In: Akintoye, A (Ed.), 17th Annual ARCOM Conference, 5-7 September 2001, University of Salford. Association of Researchers in Construction Management, Vol. 1, 785-92.*
- Zikmann, R. V. (1992) Successful Conflict management, *Construction Conflict Management and Resolution*, (pp. 53-57). Manchester: E & FN SPON.



## APPENDICES

### QUESTIONNAIRE

#### *Managing conflict in construction of projects in Ghana: A case study of selected building projects in Ashanti Region.*

These questions are designed to gather information purposely for academic exercise. Please do spend part of your time and answer the questions as candid as possible. You may answer the following questions by ticking (✓) in the relevant block or writing your answer in the space provided. You are assured of confidentiality and anonymity of personality.

#### **PART 1: Background Data: Please tick the appropriate box**

1. In which of the classification below are you?

Contractor ☐ Architect ☐ Client ☐ Project Manager ☐  
Sub Contractor ☐ Supplier ☐ Consultants ☐ Other,  
specify..... 2. Your gender? Male ☐  
Female ☐

3. What is your highest level of education?

O'Level/A'level/SHS ☐ HND/Equivalents ☐ 1<sup>st</sup> Degree ☐ 2nd degree ☐  
Other, please specify .....

4. How long have you been working in the construction industry?

Less than 1 year ☐ 1 – 5 years ☐ 6 – 10 years ☐ 11 – 15 years ☐ 16 years ☐  
above

#### **Explanation of Motivation**

Conflict occurs when one party perceives that its interests are being opposed or negatively affected by another party. This result in incompatibility, disagreement or dissonance among construction projects teams. You are to help assess the following statements and how they occur, affect and practiced in construction project.

**1. Sources/Causes of conflict (1-Not at all, 2-Occasionally, 3-Sometimes, 4-**

**Usually, 5-Always)**

a) General Sources

<b>Causes of conflict</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Inaccurate design information					
Inadequate site investigations					
Delayed client response (decisions)					
Inadequate communication among project teams					
Unrealistic time targets and durations					
Excessive change orders					
Project participants reluctant to deal promptly with changes and unexpected conditions - price escalation index.					
Slow progress and performance by Contractor					
Ambiguous and contradicting instructions					
Different perception of work quality					
Delays in payments or (such as mobilization, part payment)					
The use of substandard materials for construction					
Withheld or non-payments or disputes over payment					
Contractor submits unrealistically low bid to win the project					
Poorly developed project plan and scheduling.					

b) Contract conflicts

<b>Causes of conflict</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Inadequate construction time or duration					
Changes of contract due to site and environmental condition					



Contract inapplicable to the type of project at hand					
Contract agreement unfair and lob-sided in favour of the client					
Mismatched project risk allocation between stakeholders					
Unassigned risks associated with the project					
Contract does not fully address materials requirement					
Contract is ambiguous and unfeasible					

**2. Effect of conflict on projects (1-Never, 2-Rarely, 3-Sometimes, 4-Often, 5-Always**

<b>Effect on project</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Rework on the project					
Reduces productivity at site					
Diversion of resource in respect of management time allocated to resolving conflict					
Damaged reputation of project team					
Delays and inefficiencies in construction					
Loss or reduction of quality					
Strains business relations between construction project teams					
Delays in project completion					
Termination of contract					
Cost of overrun					
Long standing litigation in court					
Wasted funds on incomplete project					

**3. How do you handle conflict when they occur? Please tick (Note that a higher score show the greater use of a style) 1-almost never, 2-occasionally, 3sometime, 4-usually, 5-almost always**

<b>How often do you do these in dealing with conflict</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Competing</b>					
I use my influence to make my views accepted					
I use my authority to make a decision in my favour					

I use my expertise to drive home my adopted position or make decision in my favour					
I perceive my views much higher than the views of others					
I sometimes use my power to win a competitive situation					
<b>Collaborating</b>					
I explore the issue with others to find a solution agreeable to us					
I combine my ideas with that of others to arrive at a shared decision					
I work in tandem with others to satisfy our individual concerns and expectations					
All concerns are openly tabled and resolved in a best possible way.					
Jointly work with others to come up with consensual approach to work					
<b>Compromise</b>					
The conflict is decided cordially on mutual agreement					
I try to ensure that the interests of both parties are taken-on board in solving the problem					
Conflict is decided by a give-take agreement					
In solving problem, both parties distinguish between real needs from desires					
Parties examined the basis for disagreement an attempt to ensure that all concerns and interests are taken care off.					
Solutions are based on interests and not position, so that no single individual benefits more than others – splitting the difference					
<b>Avoiding</b>					
I ignore the issue when the cost of confronting it far outweighs the benefits					
I ignore the problem when it can lead to destruction					
I ignore the situation in other to protect an establish relationship					
I ignore the issue when it is tangential or symptomatic of other issues					
No adopted position is taken when solving a problem					
<b>Accommodating</b>					
I submit to outcomes when it is even against my concern					
Concerns or desires of other individuals are of much concern or prioritized					
Proposals and opinions of other individuals are well considered when deciding on a problem					
I excuse others to forestall peace					

I take responsibility when there is a problem					
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# KNUST



**Please provide answers to the following questions as they occur in construction**

1. Explain how conflict between contractor/sub-contractors and client/architect/project manager are resolved or addressed by the contract?

.....  
.....

2. Are all conflicts that arise in constructing project resolve? Yes ☐ No ☐

3. If yes/No, explain

.....  
.....

4. How does conflict affect construction project?

.....  
.....

5. What is your view about conflict in construction project? Good ☐ Bad ☐

6. If good/bad explain

.....  
.....  
.....

**Thank you for answering the questions**

