

**INVESTIGATING THE FACTORS THAT FACILITATE EASY CONFLICT
RESOLUTION ON CONSTRUCTION PROJECTS IN GHANA**

*(A CASE STUDY OF SELECTED CONSTRUCTION PROJECTS IN THE GREATER
ACCRA REGION)*

By

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Management.

MASTER OF SCIENCE IN PROJECT MANAGEMENT

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DECLARATION

I hereby declare that this submission is my own work and that, to the best of my Knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any degree or diploma at Kwame Nkrumah University of Science and Technology, Kumasi or any other educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

Construction projects in general require massive inputs of several individuals starting from the constructing team through to the client, with each of them bringing on board their specialist acumen required to bring a project to a successful completion. These individuals come together with different interests yet with a common objective of project accomplishment. As they interconnect and interdepend, interests collide resulting in conflicts posing a nuisance to project delivery, especially when such situations are not well managed. The aim of this research was to identify the factors that facilitate easy conflict resolution concerning construction projects. The study employed quantitative content analysis combined with a cross-sectional survey on construction activities being carried out within La Dade Kotopon, Shai Osudoku and Ningo Prampram districts all in the Greater Accra Region. The empirical part of the research consisted of a self-completion questionnaire distributed online and completed by 51 participants and analysed using Microsoft Excel and Statistical Package for Social Scientists (SPSS). Inaccurate design information and inadequate communication among project team members according to the results are the leading sources of conflict within the areas of study. The findings also made it clear that being acquainted with ADR practices was much better based on efficiency, effectiveness and satisfaction than the traditional method of resolving conflict. Respondents also revealed that mediation was the most effective method of dispute resolution. The findings finally revealed openness and fairness, cost and outcomes of the various methods of dispute resolution were the basic factors to consider when it came to the point of selecting a method to resolve disputes.

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DEDICATION

This dissertation is dedicated to the Almighty God for his mercies, to Rosina OKai Amankwa my wife, Owuraku Aseda Nyamekye Amankwa, Nana Kofi Okai Amankwa, the very gifts in my life, to a very special mother Doris Anyetei, who laid the foundation for my education, and to all my family members, friends and loved ones.

CHAPTER ONE

GENERAL INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Harmon (2003), in his studies to review current methodologies employed in resolving construction disputes exclaimed that the increasingly vibrant, sophisticated and complicated building projects resulted in a complicated contract document. He added that, complex building can also often lead to multifaceted conflicts, mainly due to the complexity and enormity of the job, multiple contracting parties, badly drafted and executed contract documents, insufficient planning, economic problems and communication issues (Harmon, 2003). Any of these variables can derail a project and generate conflict or dispute resulting in heavy litigation or arbitration, higher expenses and disruption of interaction and relationships. Akinradewo (2017), trying to evaluate dispute resolution in the construction industry in Lagos State, Nigeria, discovered the construction industry to be a fertile source of dispute basically because many human and non-human variables are combined to produce. Dispute management therefore is a fundamental part of the entire project management process.

By tradition, when parties to a contract are in dispute, resolution is often sought. According to Hughes et al. (2015), the construction industry has three predominant categories of dispute resolution methods in their studies conducted on the laws and management governing construction contracts. They refer (i) litigation, (ii) arbitration and (iii) alternative dispute resolution (ADR), as procedures that allow sides to reach an agreement based on their own negotiations rather than a formal litigation process. Negotiation, mediation and arbitration include these techniques. Arbitration has long been supported in the construction industry as a comparatively fast, cheap, most accessible and

effective method. In recent years however, it has gained party with litigation, which is often a costly and long-winded means of resolving a dispute. This is somewhat owing to the influence of lawyers (Hughes et al., 2015).

Love et al. (2010) conducted a study on dispute causation in the construction industry. Their aim was to identify the pathogenic influences of resolving these disputes in construction. They mentioned that the increasing litigation costs have made dispute resolution methods faster, less costly and more appealing for parties. Quantifying the costs for dispute resolution procedures in the construction industry, Gebken and Gibson, (2006) asserted that litigation expenses include but not limited to the compensation payable in respect of settlement and other economic losses incurred in the course of a construction conflict that could be very exorbitant for the losing party.

Resolution at primary stages of disputes prevents litigation. Since the start of industrial revolution in the United Kingdom, which later spread to the whole of Europe by the end of the twentieth century, industrial organizations which emerged as an aftermath of the revolution have ever since been stricken by various forms of conflicts (Voster, 1993). Conflict as is known, is an active disagreement between individuals with disagreement or principles, which normally end up causing problems in organizations.

Conflict resolution is that process which attempts to resolve disputes or conflicts. It relies on a number of factors to make a building project successful. A significant factor is the approach of the parties to issues and conflict with a building project. Disputes generate a hostile atmosphere in a project, promote lack of confidence and weaken the co operation of the construction procedure.

A research conducted by Yates and Hardcastle in 2003 on the causes of conflicts and disputes in the construction industry in Hong Kong revealed a sharp increase in conflicts

and disputes in the construction sector. It established that conflicts and disputes resulted in elevated expenses, both directly and indirectly (Yates & Hardcastle, 2003). The direct expenditure discovered include expenses for the attorneys, claim advisors, management time, and project completion delays, while the indirect expenses include degeneration of working relationships, doubt between respondent, weak teamwork and resulting poor workmanship norms, the very factors that undermine the achievement of the project.

These repercussions of conflicts give premise to the declaration that, in a project setting conflict and subsequent modifications need to be recognized and planned so that they can be efficiently controlled. Analyzing the causes and management approaches to conflicts, Ntiyakunze's study in 2011 on conflicts in building projects in Tanzania however states that, conflict planning and control in project requires extensive knowlegde of conflicts and their causes. This is essential for setting up timely cost effective policies and mechanisms for their management and avoidance if the project is to succeed.

However, some disputes may be significant and may result in helpful project outcomes. Looking at the merits of promoting conflict in the construction industry, if any, Loosemore and his cohorts (2000) argue that, Significant or functional disputes offer organizational learning and creativity possibilities. Therefore, such functional conflicts should be allowed to last until project constraints are infringed and helpful results are obtained. However, conflicts that have adverse effect on the project should be prevented. This study therefore explores factors that facilitate easy conflict resolution in the construction industry in Ghana.

1.2 PROBLEM STATEMENT

It is known that the building sector is prone to high dispute rates. The building industry's adversarial and confrontational nature underpins the germination and manifestation of

building conflicts. The sector has therefore been looking for effective and efficient dispute resolution methods (Conlin et al., 1996).

Although disputes are often deemed inevitable, as El-adaway and Kandil (2010) have stated, disputes within the construction industry are definitely regarded excessive and are often a significant adverse factor in the sector. (Panagiotis & Howell 2001:223). Broad varieties of dispute resolution methods are now available to resolve conflicts over construction. Gaitskell (2005) highlighted the many alternative dispute resolution procedures presently in use in the sector, including arbitration, mediation and expert determination. Despite the incidence of such procedures and while the amount of conflicts within the sector has decreased somewhat, they stay widespread.

Moreover, although these dispute resolution processes may be useful, they endure two major disadvantages, as Robert Hunt stated in 2003. at the Dispute Resolution Boards NADRAC Conference which was later published in 'The Arbitrator & Mediator' (Vol.23 No. 2 August 2004). The first disadvantage being a greater test of the trust between the parties involved or at worse, getting destroyed and the other disadvantage being the time and cost of resources involved in resolving a dispute (Hunt, 2003). Situations as these, thus give premise to further probe into the factors that facilitate easy conflict resolution of construction projects within the Greater Accra Region.

1.3 AIM AND OBJECTIVES

1.3.1 Aim of the Study

The aim of this study is to identify the factors that facilitate easy conflict resolution on some construction projects within La Dade Kotopon municipality, Shai Osudoku, and Ningo Prampram districts of the Greater Accra Region in Ghana.

1.3.2 Objectives of the Study

The specific research objectives are:

- a) To identify the major sources of conflict affecting construction contracts within the selected districts
- b) To assess established conflict resolution methods employed in resolving conflict in the construction industry within the selected districts.
- c) To identify the factors that expedite the selection of a resolution process of the identified projects within the selected districts.

1.4 RESEARCH QUESTIONS

The study was based on the following research questions:

- a) What are the major sources of conflict affecting construction projects in Ghana?
- b) What methods are used to manage conflict resolution in the construction industry?
- c) What factors influence the choice of dispute resolution method?

1.5 SCOPE OF THE STUDY

The research emphasizes on inner disputes in building projects, i.e. disputed between members in the construction team within the project organization. Participants are regarded as companies in their capacity and not as individuals. For example, where in a building team a contractor or an architect, engineer or quantity surveyor is mentioned as a member, it is regarded to represent a company. Therefore, this research does not include disputes that may occur in a construction team at a private or individual level, but it must be understood that disputes at a company or organizational level can be affected by private or personal disputes. In addition, the study covers only construction project participants in Accra.

1.6 RESEARCH METHODOLOGY

Research is the systematic investigation and study of materials and sources to determine facts and to arrive at fresh findings. Methodology of research is a systematic way to solve a study issue. In carrying out a study activity, the investigator adopts a number of techniques or methods.

Citing the second edition of *Basics of Social Research: Qualitative and Quantitative Approaches* as written by Neuman (2007), there are three (3) main techniques used when carrying out a research namely; quantitative, qualitative and mixed method. Saunders, Lewis and Thornhill (2007) in their fourth edition, *Research Methods for Business Students* make it clear that a particular design may very much be dependent on the assumptions in respect of the nature of information and actuality, and how an individual discerns knowledge and actuality, in addition to the procedure of obtaining knowledge about reality.

A quantitative research design is appropriate based on the purpose of this study. Quantitative method enables big populations to be studied and enables numerical scrutiny centered on realities collected through surveys and experiments (Saunders et al., 2007).

A cross-sectional survey method is seen as appropriate for this research due to time constraints and information will be gathered via administration of questionnaires. A sample will be taken as a survey research and the outcome will be used to create inferences about the population to be studied, which is astronomically cozy. The research focuses on the construction sector stakeholders in Ghana who carry out project specifically in Accra. The stakeholders are mainly clients, project managers, contractors, sub-contractors, suppliers, quantity surveyors, monitoring and evaluation officers, engineers and architects.

The information or data needed for the study will be generated from both primary data and secondary data. The primary data as explained Hussey and Hussey (1997) in “A Practical

Guide for Undergraduate and Postgraduate Students” gather data from the field and secondary data are data gleaned from existing writings. Both primary and secondary data are used in this study.

The theory-based discussion done in chapter two of this study will be acquired from existing literature or secondary sources from journal articles, and web sites of professional bodies, databases and books. The primary data on the other hand will be garnered from the field using the data gathering tools like questionnaire survey, from which the key findings and results emanate.

1.7 RELEVANCE 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 affecting business relations of which the building construction sector cannot be excused (Hagan, 2015). 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 that are likely to occur and how to handle them within the industry.

The study will moreover unearth or expose 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 near future in the construction of projects within the Greater Accra 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 study will present a range of techniques of conflict resolution used in the construction industry to inform the public, especially those in the built environment. Similarly, others in a similar industry may use methods for managing conflict or disagreement that may arise in their respective businesses.

The data contained in the research can therefore also be used as a basis for the development of a charter or a framework for the conflict control in the building sector and other public-related works by the State. To sum up, a survey of this scope can be used as a reference point or material for advanced conflict management studies, not only in building but also in other fields of job or field related to teams.

1.8 DISSERTATION ORGANIZATION

It includes five parts of this research. The first section will comprise the background of the study, issue statement, goals of the study, research issues, research justification, study scope, restriction of the study, and structure of the thesis.

The second section 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. This chapter offers a general summary of the building sector highlighting the project group.

The third section 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 will present first-hand statistical 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 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 factors that facilitate easy conflict resolution in the construction industry.

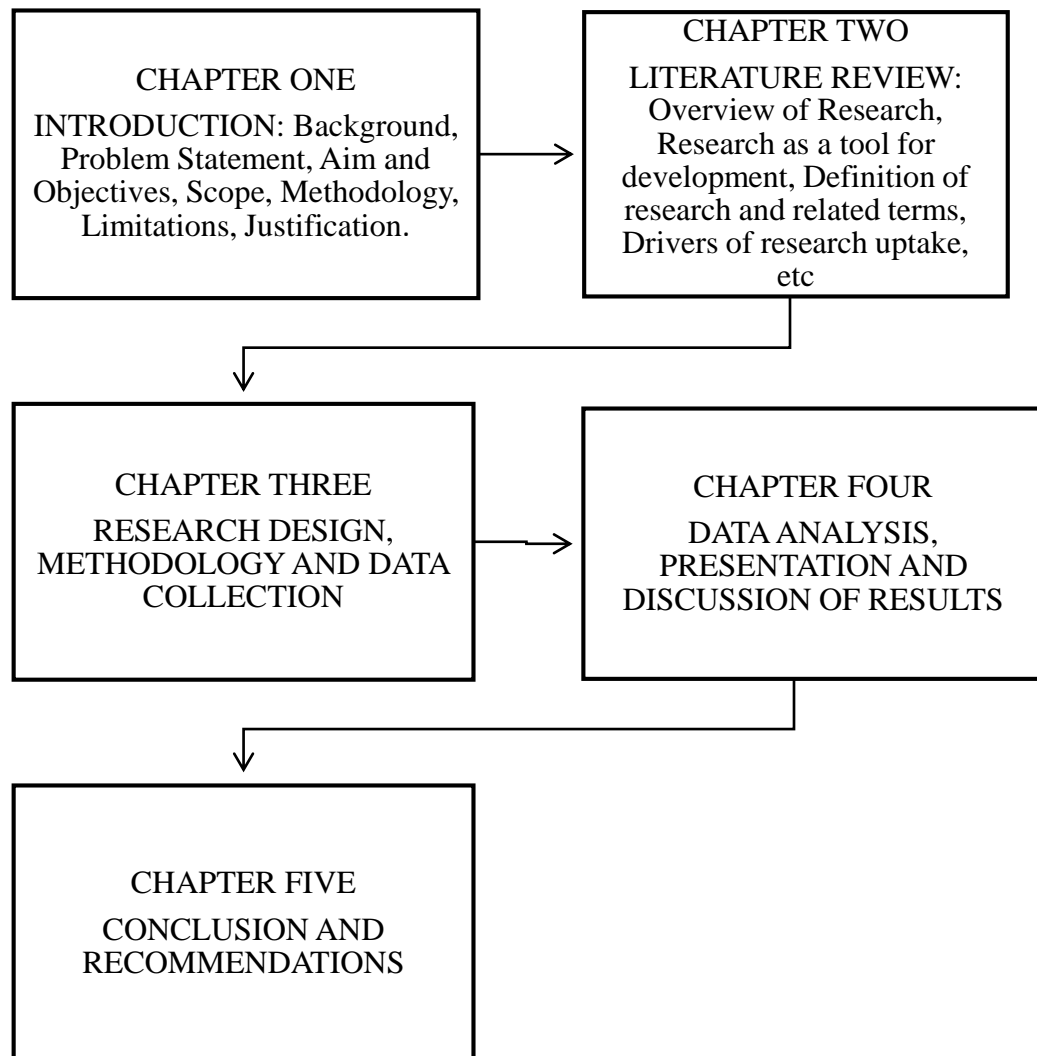


Figure 1.1 Overview of thesis workflow

1.9 THE STUDY DELIMITATION

This study was designed to look into the factors that facilitate easy conflict resolution of some construction projects in the Ghanaian construction industry as it has proven obscure in certain parts of the country especially Greater Accra. Conflict resolutions have been

influenced by different factors in these areas. Although vital, not all of these areas were considered. This study thus draws its respondents from construction firms' representatives and key management personnel and other key informants like property owners or stakeholders (where available) situated in Greater Accra.

1.10 CHAPTER SUMMARY

This chapter started by looking at the dynamic and multifaceted growth of construction and its reflections in resultant disputes in all concerned areas where there are construction activities being undertaken. The problem statement was identified. The aim of the study was to identify factors that facilitate easy conflict resolution of some construction projects in Greater Accra-Ghana.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This section reviews literature based on research conducted and directly linked to the research. The literature is examined as follows under topics derived from this study's goals: To identify the major sources of conflict of some construction projects in the Greater Accra Region, to assess established conflict resolution methods employed in resolving conflict in the construction industry and finally to elicit factors that expedite the selection of a resolution process.

2.2 MEANING OF CONTRACTUAL DISPUTES

As explained by LynandBrown.com.au, a contract in law is an agreement, legally binding between two or more parties, which compels those parties to carry out specific performances as promised. In other words, a contract is a legal document between two or more parties that obviously outlines what each party expects and needs in a specific transaction.

As such, a construction contract is that contract between and among an owner and the various professionals involved in any form construction activity, where both parties exchange promises to construct a designed structure at a fee setting all necessary conditions straight. In order for the contract to be enforceable, each party must exchange something of significance that is generally referred to as "consideration." Furthermore, all parties concerned must have a strong knowledge of each contract term; and they must agree on the terms.

There will be issues arising from agreements as surely as night follows day. Problems often lead to conflicts, with either party disagreeing with the agreement about what was agreed or whether one party failed to "conduct" their contract portion. (mybarrister.co.uk) A contractual conflict is when there is a disagreement between a party to a contract regarding its terms or definitions. In other words, if sides have competing interpretations of the terms of a contract and one party seeks particular achievement, damages, or both from the other party.

In contract law, as per legalmatch.com, a contract dispute is usually regarded as a contract breach. A violation of contract occurs when the contract is not maintained owing to the failure of one party to meet its duty under the contract terms. If badly handled, contractual disputes can be expensive and time-consuming, end up in court and harm the business relations and reputation of a company

2.2.1 CONTRACT CLAIMS IN CONSTRUCTION

Brown et al. (1993), in their studies to familiarize themselves with ADR principles and practices in London, referred conflict to be a doubt or questioning, opposition, contradictory conducts, controversy and disputes to be one of the variety of events considered as conflict. Claims often occur between the contracting parties. This may be due to issues such as delays, modifications, unforeseen conditions, inadequate data and disputes.

Reviewing international construction laws, Kumaraswamy & Yogeswaran (1998) identified important sources of allegations in the building sector and argued that a dispute could be said to occur if the other party dismisses a statement or claim made by one party and that dismissal is not recognized. They continue to argue that differences of opinion

lead to conflict and conclude that conflict in some cases could be of advantage, for instance by creating better options, particularly at the planning phase of construction.

This shows that conflicts are more probable to happen when the competing sides bring a controversial action. Alluding to Vorster (1993), a dispute is defined as a conflict over a project operations problem, generally leading from a discussion about variations in the perception of the scenario by two or more sides. Deutsch (1973) also describes conflict as unharmonious actions. To him conflict happens when one person's behavior interferes with or impedes another's behavior.

Rubin et al. (1992) conducted a study on the presentation, analysis and defense of construction claims in New York. Making use of cross-sectional survey, information gathered from respondents revealed that the state for construction dispute is perpetually composed directly into the agreement long before the necessary resources reach the job site. Circumstances for dispute for example, procurement system, instalment schedule, money or the agreement type affects the incidence of the disputes during or after the execution of the project (Rubin et al., 1992). Ellis and Baiden (2008) clarified that conflicts between project respondents were recognized as the main reason for bad results in building projects, extended execution delays, interruptions and suspensions of some projects.

Just as there are many descriptions of conflict, similarly, there are events for its occurrence. Thomas (1992) reflections and updates on disputes and their management identified three topics among conflict definitions. The first thing he stated is whether there is dispute or not, is a problem of perception. The obvious contrast may not be real but rather on the other hand if the thing that matters is genuine however not seen there is no conflict. The second thing is each has the potential to interfere with the other (i.e. there is interdependence among parties). Third, blockage, resistance, and shortage are problems. Assets are

restricted, such as money, authority and glory. Their shortage results in blocking behavior. This is in consonance with (Robbins, 1994), in *Essentials of organizational behaviour* where he states that when one party blocks the means for another's purpose or interest, a conflict situation is established.

Leung et al. (2005) investigated whether there was a connection between construction disputes and the satisfaction of the participants. They partly confirmed the beneficial effects of conflict on construction projects by using case study and questionnaire survey respectively to confirm the link between unique kinds of conflict and the satisfaction of participants. They discovered that a suitable degree of conflict — especially task conflict — can enhance the fulfillment of the respondents up to a particular moment before declining.

According Soeharto (2001), despite the fact that conflicts in a project can obstruct the accomplishment of one of the parties, there are however, some advantage that can be derived. To him, Conflict can provide data and fresh thoughts that ultimately enhance decision-making quality. In addition, conflict can force the parties concerned to reconsider and reassess their opinions. Conflict can also prompt issues that had been covered to be brought to light and allow the management assist in finding finest solutions for the projects. Finally, conflict can teach parties to mutually understand and respect other's opinions.

2.3 MAJOR SOURCES OF CONFLICT AFFECTING CONSTRUCTION PROJECTS IN GHANA

Preventing or handling conflicts and disputes involve series of actions. The first major intervention is to trace the causes of issues (Mitropoulos & Howell, 2001). Many factors have been asserted as the causes of some construction projects ' disputes.

Hohns (1979) who researched into preventing and solving construction contract disputes posited that the nature and features of the conflicts over construction are different, and the sources of the dispute differ from project to project.

He also identified five incidents that his surveys found to be primary sources of construction conflicts that included the presence of mistakes in the plan or project, faults or omissions in the contract papers, inability to factor all the required start-up costs of an enterprise, altered situation, consumer response and the individuals concerned.

Shin (2000), focusing on identifying critical disputes characteristics during construction project operations reported that disputes can be created by the stakeholders including architects, contractors, engineers and other construction related professionals. Diekmann and Girard (1995) who also came up with factors leading to contract disputes reinforce this argument. Their focus was on some distinct features of the project, including the individuals concerned, the procedure and the elements of the project regarding the case of contract conflicts. The after-effects of their research argued that each of the three elements had a part to play in affecting the likelihood of contract disputes, but the "people" factor was able to avoid contract conflicts.

Fenn et al. (1997) advancing research in the difficult conflicts and disputes in the construction industry, noted bad communication between team members, insufficient tracking mechanisms for requesting data, inability to appoint a project manager, lack of leadership, bad mistake and coordination attempts on the part of the project, Unwillingness to verify buildability, inability to react in a timely way, lowest cost mentality in contractors and developers engagement, lack of team spirit among the respondents, clarity and completeness, and lastly, discrepancies in contract papers were some other causes of construction conflicts.

Similarly, Hall (2000) who believed ineffective communication to be one of the underlying mutual causes of construction conflict recognized experts as some of the numerous agents for construction conflicts. It involves inability of professionals to comprehend their duties under the design team agreement, over the design and underestimation of expenses concerned, late delivery of data as well as cumbersome approaches to requesting data, design and error-free specification surveillance and omissions arising from uncoordinated civil, architectural, structural, electrical and mechanical models and drawing specification incompleteness.

Cheung et al. (2006) conducted a study to assess the styles of negotiation employed during construction dispute and their outcomes using the mixed approach. Finding some causes of disputes, which will call for negotiation, from their research, they decided that adding unique circumstances to contracts, altering construction plans and requirements and the resulting contradictions and misinformation in the mass of documents could all contribute to the growth of construction conflicts.

Cheung and Yiu (2007) performed a follow-up research on mediation in dispute resolution by examining the taxonomies of sources of dispute, mediator tactics, and the results of mediation. By doing so, they acknowledged significant factors on dispute grounds. Sources of disputes were therefore categorized as associated to building and human behavior. The sources of conflict identified with construction factors as per the study, revealed acceleration cost, clients failure to pay for variation claims, delay interim payment from client, the valuation of liquidated and ascertain damages against main contractor, late instructions from the architect and engineer, architect/engineer dissatisfies the work progress of main contractor, errors substantial to changes in bills of quantities, argument on the prolongation costs, arguments on the measurement and valuation of the contracted work, main contractor failing to proceed in a competent manner and late release of retention

monies to main contractor. Moreover, arguments on the time extension costs claimed by sub-contractors, non-payment to sub-contractor by main contractor, main contractor ceasing to work on site, main contractor denying access of the site for the sub-contractor, subcontractor's works being delayed due to main contractor, consequences of opening for inspection and sub-contractor ceasing to work on site.

On the part of human behavior, Cheung and Yiu (2007) identified negotiators lack expertise, too many questions put to the table, parties having unrealistic expectations, both parties unprepared to negotiate, both parties aiming to take control over proceedings, no confidence between the sides and no confidence in the mediator. Although some variables are shared by most of the authors in their various studies, the causes however still seem cumbersome to be grasped and focused on. A much simplified categorization of conflict causes in construction was identified by Williamson (1997) being causes due to behavioral, contractual and technical problems. The categorizations will be explained thoroughly.

2.3.1 Conflict causes due to behavioral problems

Behavioral problems include cultures, personality, human interaction and professional background among project teams. Construction involves people and the successful contract administrator to a contract interpretation or disputant to an unfortunate incident on a project, is well served to know a little about the individuals involved as per Hohns (1979).

Individuals in the construction industry are considered to possess a strong herding nature and that they seek and need that sense of approval amongst themselves. Words like belonging, loyalty, recognition or acknowledgement, predominance including others are distinct of the human elements of gregariousness. It is one thing to lose assets like cash in an agreement issue; however, it is counted a big loss to lose face and dignity.

McManamy (1994) alludes that all individuals know about themselves that they feel must be characterized and regarded. Clashes can regularly be all the more effectively settled when every one of the inner selves included could be saddled. Not only are people typically quick to protect their self-image as it usually seems, they also want to maintain and extend the positions, which they presently hold, or claim is theirs. Any manipulation framed in terms of promotion, money, acquisition, or being shielded will for that matter, be heard and will very often receive action. Everyone requires room, a superior future, and a chance to create self-esteem recognition.

According to Carmichael (2002) who conducted research in disputes affecting international project, also made revealed in his findings and conclusions that construction disputes escalate because the individuals involved have needs to satisfy. The demands are generally linked to cash and profit from the contractor side. Likewise, the architect has the thoughts, structure or plan that can simply be the monument or landmark for themselves, their reputation, masterful demeanor, cash, premium insurance and the like. The owners also need; corporate careers, political careers, the need for a certain day to have the space. With these necessities in jeopardy, communication becomes strained and these pressures always seem to be followed by heavier strains, requests, refusals, tougher positions and losses of cash. These problems arise in the lack of team spirit solidarity and bad communication between project teams. As referenced in the passages above, individuals are the main source of construction disputes, and are at the same time, the only solution to these disputes as well.

2.3.2 Conflict causes due to contractual problems

A contract, according to Wikipedia, is a legally binding agreement, which recognizes and governs the rights and responsibilities of the contracting parties. In an agreement, parties create a set of commitments to each other, an infringement of which the law provides the injured party a remedy or the fulfillment of the promised obligation.

Kumaraswamy and Yogeswaran (1998) stated that most of the sources of building conflicts were recognized with legally binding issues, incorporating variations in initial plan, extension of time, payment issues, quality of technical specifications and other factors. To some extent, the notion of a standard agreement guides activities towards normal procedures and provides a sufficiently shared perspective on contract definitions, clarification of building activities and particular project specifications. That notwithstanding, Client and all project stakeholders acknowledge the very fact that a perfect set of contract documents is difficult to obtain or merely lacks (Hohns, 1979). All drawings in the contract agreement may by one way or another have mechanical drafting errors or lack a needed dimension or detail.

A considerable amount of these blunders comes from the designer and drafter's human nature. Aside from these human errors, the design and construction method of these projects continues to change. The more complex the project, the more complications a change has. No individual can know or remember any place that has been shown a certain detail. Also, the larger the project, the more individuals and thoughts engaged. The bigger the project, therefore, the more mistakes there are (Hall, 2000). Document mistakes become the owner's obligation when they cost an unforeseen quantity of cash to the contractor. Similarly, errors become the designer's fault when his associates' decision and the industry's custom are gross and intolerable.

The next contractual source of conflicts is the plan. A key source of disputes, which emanate from design deficiencies, is that which is categorized as defective plans. Studies by Hellard (1992) conducted on construction conflicts, its management and resolution in Manchester, England, mentioned some underpinning causes of contractual conflicts. He recalls missing dimensions and details, wrong scales, erroneous elevations or grades and numerous others. These mistakes are not only prevalent, but everyone who works with plans realizes that drawings can always be refined and upgraded.

Plans can always be enhanced and enhanced, but there will always be conflict between them. The frequently asked question about plan deficiency conflicts is, at what point the plans become faulty to the point where they generate undue expenses from their use. The typical legal definition is that plans should be prepared according to the standard of care observed in the profession, but there is no accurate standard.

In some cases, customer pressures have a negative impact on the degree of performance that usually exceeds the plan's objective intent. This plus poorly drawn plans, poorly drawn information, bad requirements and poorly prepared drawing notes may have reached a point where, in a party's view, an acceptable level of results may not have been achieved.

However, the liability may well exceed the omission or mistake. A building problem's extra expenses usually exceed the direct costs. The owner and the contractor reserve the option to expect the designer to produce a set of drawing plans, which will enable the project to be built. Therefore, if the designer's mistake keeps the contractor from achieving its ends, there is the question of capacity and consequential cost evaluation.

2.3.3 Conflict causes due to technical problems

Uncertainties being the underpinning cause of technical disputes are considered one of the most common issues in project operations. In *Designing complex organizations*, written by Galbraith (1973), uncertainty is the difference between the volume of information needed to undertake the project and that, which is already processed by the organization. The quantum of information needed depends on the intricacy of these project and the effectiveness of planning, i.e. the gathering and interpretation of information prior to the task (Mitropoulos & Howell, 2001).

Uncertainty may prompt unreasonable customer desire, for example, ridiculous contract length, overdesign, insufficient site or soil examination report, late instructions or information from architect or engineer, error and incomplete technical specifications and numerous others. The deficiencies in design, which leads to a major dispute, is generally beyond an error of omission. For a deficiency to be that significant, the design error usually must alter the means, methods, environment, duration, or the conditions of the construction process. Any number of factors can influence this.

Design mistakes generally occur in the foundations, in the building of frames and enclosures, in the use of areas such as methods and equipment and the defined end outcome needed, and in association with associated results by others on which the project in question must depend at some stage. Jessup et al. (1963) adds that, Disputes arise continuously as a consequence of some negligence in considering the costs at the start when the costs were to be determined

Essex (1996) conducted a study on the means of avoiding and resolving disputes during construction. His paper addresses the matter of uncertainty of subsurface ground conditions

and in addition provides an historical perspective on how owners, engineers, and contractors have attempted to leverage that uncertainty for their individual benefit.

Speaking of costs, he argues that conflicts occur when jobs do not go as anticipated, and the reason for this is most often the failure to correctly calculate costs. Failure to count the costs initially is not only confined to the contractor who agrees to mount the structures, but also applies to the owner who set out to build a building unrealistically, as well as to the architect who intends to design the structure for less than it would cost in terms of design or construction. In building, in brief periods, colossal quantities and scope of job are regarded and engaged. Somebody probably does not count anything and ends up with an excessively low cost. In most instances of these situations, most of those involved in the committing of these errors in the industry simply do not have the cash or requisite assets to settle out the implicit costs.

In *Reconstructing construction law: Realities and reform in a transactional system*, Professor Stipanowich (1998) extensively explored the entire transactional system surrounding contracts for design and construction of the built environment. He examined the legal landscape of construction, focusing on “cases of trouble,” and evaluated options for reforming the legal framework including codification, a restatement and more narrowing tailored legislation. He presented that building pricing methods are often not to take into consideration the process of erection that will eventually be needed in adequate detail. The modern architect does not want to tell how to do a job or prescribe any sequential limitations that are not associated with strength. In this way, millions of working funds are valued under severe time pressure using a fixed unit price determined from the experience of the estimators and which have been shown to a certain extent in ongoing or recent projects. In the initial stage, a contractor's inability to comprehend and/or properly offer or value the job is a significant reason for conflicts.

2.4 CONFLICT RESOLUTION METHODS FOR CONSTRUCTION

CONTRACTS.

The aftermath of construction disputes affects all stakeholders. As said earlier, it may lead to an inequitable mode of project delivery such as increased costs, reduced margins and reduced quality and level of service. A construction project involves a wide range of participants starting from owners through to sub-contractors, among others. Each participant has their individual objectives and interests as far as intrigue conflicts and disputes are concerned.

Assessing cases for coping with construction disputes, Cheng et al. (2009) reports that the construction industry has gained a reputation for being uncooperatively contentious and litigious in a manner that often damages the standing of parties locked up in the dispute. Such disputes affect work quality and defers construction project advancement. He adds that as a result, that the construction industry keeps on attempting to distinguish approaches and ways to resolve disputes impartially and economically.

In reference to the "culture of conflict" of the construction industry, Latham (1994) defines building conflict as negative, perhaps because it is intertwined with confrontation, mistrust and conflicts. Higgin et. al. (1966), also considered conflict to be "a bad thing," one of the primary problems of construction, and generally the effort was to avoid and eliminate.

However, Rahim (1992) in his article, "Managing conflict in organizations," believes that organizational conflict should not necessarily be decreased, suppressed or eliminated, but that it should be possible to improve the efficiency of individuals, groups and organizations. Positions like this were regarded "pragmatic" by accepting the inevitability of conflict and concentrating instead of eliminating them.

However, Lee (2008) who conducted an empirical study of Malaysian companies to assess the styles used to manage superior-subordinate conflicts reported that the use of conflict management models depends on a given circumstance, i.e. a specific style may be more appropriate than other situational styles. Conflict management, as Follett (1940) said, can be conceptualized in five ways: avoidance, suppression, dominance, inclusion, and compromise. In addition to Follett, other scientists and authors have suggested other similarly prevalent styles of conflict management. Other techniques mentioned include Rahim and Bonoma's Two-Factor Theory (1979); Deutsch's Single-Dimension Model (1973) and Thomas-Kilmann's Mode Instrument (1974).

The Thomas – Kilmann Conflict Mode tool, also known as the TKI model, gives insight into the typical reaction of an individual to conflict conditions using one or more of five types of conflict management: compete, accommodate, avoid, collaborate, and compromise. These modes reflect varying levels of interests on two main axes labelled assertiveness and cooperation.

Rahim and Bonoma (1979) in their study, *Managing organizational conflict: A model for diagnosis and intervention*, defines the Two Dimension model as self-concern and others-concern, but Blake and Mouton (1970) describe it as self-oriented and others-oriented.

Assertiveness measures the extent to which the individual tries to satisfy his or her own concerns, while Cooperation refers to the willingness of an individual to satisfy the concerns of the other person. By defining alternative styles of conflict resolution and how and when to use them most efficiently, the TKI evaluation enables individuals to reframe and defuse conflict by choosing the best alternative dispute resolution or litigation technique, as the final resort, creating more productive outcomes.

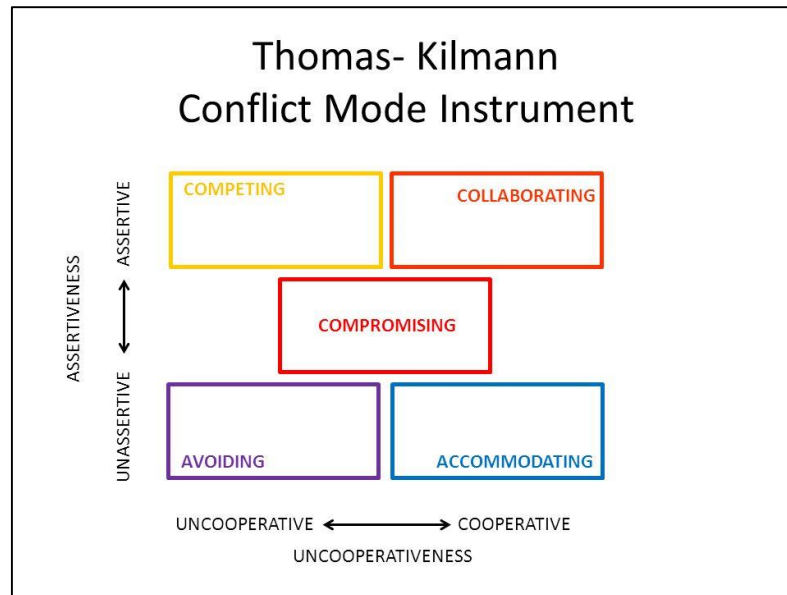


Figure 2.1: Thomas–Kilmann Conflict Mode instrument.
Source: Thomas–Kilmann Conflict Mode instrument (1974).

2.4.1. Competing as a style of handling conflict

The competing style 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 than for others. Leung et al. (2005) 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 fixation on winning under competing mode according to Zikmann (1992) results in the conflicting party withdrawing cooperation and taking a position to defend their adopted stand. Blake and Mouton (1964) describes the competing mode as direct and uncooperative. This mode has been criticized for its social inadequacy and the likelihood of worsening conflict response; because it demotes other people's concerns (Zikmann, 1992).

2.4.2 Avoiding as a style of handling conflict

The avoiding style is neither cooperative nor assertive. It does not give preference or priority to both parties' issues; it is regarded as a lose - lose style (Leung et al., 2005). To Thomas and Kilmann (1974), a party may be aware of a conflict within a project team but may subtly sidestep or postpone the issues. It also means withdrawing entirely from a threatening situation. They stated that this style is normally beneficial when the cost of handling a conflict far outweighs the benefits of its settlement.

Lee (2008) in support also referred to this style as a side-stepping and a buck-pass of the issues in conflict. He enunciates that the Avoiding style is most useful when the issues in conflict are trivial or has a tendency of becoming destructive.

2.4.3 Accommodating as a style of handling conflict

The accommodating style is unassertive and cooperative, and is labelled as lose-win style of managing conflict. Individuals who opt for this mode of managing conflict are referred to as conflict absorbers. They tend to sidestep their own concerns in favor of the opposing party's interest. These individuals according to Lu and Leung (2001) will rather maintain a relationship than to have their way.

To Rahim and Bonoma (1979) the attitude of low concern for self and high concern for others is referred to as obliging. There is an altruistic attitude or self-sacrifice in this mode of conflict management. When one wants to develop social credit as a strategy for later issues that may be of paramount interest to the individual, such a management style may be adopted. Especially when it is equally important to preserve harmony and to protect the project from disruptions (Thomas-Kilmann, 1974).

2.4.4. Collaborating as a style of handling conflict

Collaborating style is both assertive and cooperative in equal magnitude, in that, it is high on assertiveness and high on cooperativeness. Collaborating as per Rahim and Bonoma (1979) is one and same as integrating. The sides are very worried about themselves and in the same measure they are very worried about their rivals. Often this style is called a win - win style. The sides operate in cooperation with the other party to discover a common solution that completely responds to both parties ' problems.

Collaborating between two individuals according to Thomas and Kilmann (1974) might take the process of exploring disagreements to gen up from each other's intuitions, resolving concerns that would otherwise have them competing. The parties are willing to settle the dispute 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 increases individual and team effectiveness, as typified by greater satisfaction and feelings of self-efficacy among conflicting parties, and more beneficial solutions lessen the likelihood of future conflict (Tjosvold, 1997 cited in Kiani et. al., 2012). This style is more suitable when parties want to merge insights from people with different perspectives on a problem and when they wish to gain others commitment by fitting in their concerns in the final decision.

2.4.5 Compromising as a style of handling conflict

Compromising is a style that declares neither a loser nor winner. For the French the compromise mode is a “lose-lose” decision, that which should not be encouraged. However, Zikmann (1992) sharply contrast the French position and affirms that most managers in the construction industry submit to the view that compromise is the best

response as it usually guarantees that the demands 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 likely that they will be eager to amend their adopted positions.

Compromise according to Thomas and Kilmann (1974) might mean splitting the difference, exchanging concessions, or seeking a quick middle-ground position. Thomas and Kilmann (ibid) adds that compromise is appropriate when two opponents with equal power are strongly committed to mutually exclusive goals, example, labour-management bargaining, but an overuse of this mode generate a cynical environment of gamesmanship.

Often the focus of the proposed alternatives is to protect one-sided advantages or create win - win situations when litigation arises (Cheng et al., 2009). A win - win situation is therefore hard to understand, or in some instances impossible. According to Fereig (2007), the outcome will be a lose-win situation, or even a lose - lose situation in some instances due to wasted time and legal counselors ' cost. Brooker (1999) examined the attitudes and practices of building attorneys in the use of ADR in conflicts between contractors. His focus was to explore the amount of participation of legal consultants in the construction industry in the dispute resolution process and the views of legal experts regarding the use of ADR in building disputes. In his report, the building industry is characterized as being argumentative and contentious as its disputes are sometimes widespread and far from reach. The methods of resolving project disputes customarily have been through arbitration or litigation, but then, both procedures have fallen into disrepute, especially regarding their costs, delays, multifaceted nature of procedures and ill-disposed methodology (Latham, 1994; Hoare et al., 1992).

The building team settles most minor disputes fairly, amicably and quickly as times go on however, more stern issues come into dispute. In moments like that, it is prudent that the

project manager bends over backward to achieve a reasonable settlement by negotiation. On the off chance that it falls flat, it ends up important to utilize at least one of the disputes resolution mechanisms available that is mediation, adjudication, arbitration and litigation.

According to the RICS (Royal Institution of Chartered Surveyors) guidance, all other techniques are subsequently rooted from three distinct procedures. These processes are negotiation, mediation sometimes connoted to conciliation, and adjudicative procedures. Dispute settlement in the court is costly, formal and time consuming. The dispute resolution procedures are sometimes mentioned in the contract terms and conditions of some construction projects. Contracts have an Alternate Dispute Resolution (ADR) mechanism. ADR is a Third Party interpolation and involvement for the resolution of disputes between two or more parties. ADR procedures are usually cheaper compared to litigation and more expeditious.

The effect of discontent and disappointment with the usual dispute resolution structure has led to excitement and enhanced interest in the United Kingdom's concept of alternative dispute resolution (ADR), as it has in other comparable jurisdictions, such as the United States and other nations. (Stipanowich & O'Neal 1995; Stipanowich & Henderson 1993).

2.5 ALTERNATIVE DISPUTE RESOLUTION (ADR)

Alternative Dispute Resolution (ADR) is to use techniques such as mediation and arbitration to resolve a dispute rather than a conflict. ADR is a litigation-free way to settle conflicts. Using ADR processes can prevent the acrimony that often accompanies prolonged studies and enables parties to know the situation of each other and develop their own alternatives. These processes are generally confidential, less formal, and less stressful than traditional court proceedings.

One of the main reasons parties prefer ADR proceedings is that, unlike adversarial litigation, ADR proceedings are generally cooperative and enable the parties to know the positions of each other. In addition, ADR enables the parties concerned to come up with more innovative alternatives that may not be legally enforced by a tribunal.

ADR methods used in Ghana

There are various ADR mechanisms used presently in Ghana for the resolution of conflicts. They have varied philosophies, principles and rules governing their operation. This section examines the various mechanisms adopted within the country to help in the resolution of conflicts as applied in the construction industry.

2.5.1 Negotiation as a method for conflict resolution

Negotiation is any form of direct or indirect communication used jointly by parties of differing interests to help them manage and resolve their issue (Judicial Service of Ghana). It is the most accessible procedure among the ADR processes that anyone can utilize. It very well may be utilized in settling effectively existing disputes or for laying the foundation for future relationships between parties (Justice.gc.ca).

Negotiation is thus the first step most disputants take in resolving a conflict without calling on a third party. Abban (2017) conducted a research on the 'The role of ADR in the Ghana Construction Dispute Settlement Perspective of Contractors'. A total of 123 questionnaires were sent to acquire information based on the goals set for this research. Interviews to acquire information were also performed. The general reaction rate was 60.16%, a gross total of 74. In his report, Negotiation is a voluntary process and hence nobody must be coerced into. As a result of its voluntary or willful nature, parties at any point can pull back from the negotiation process and discard any form of decision arrived at which might not

be in their favor. Parties are at liberty to directly negotiate with each other or be represented by selected persons whom they deem fit to represent them. Parties are however, given autonomy during the negotiation process (Justice.gc.ca).

Negotiation as an ADR process has many benefits. It is faster, cheaper and prevents unnecessary delays. Numerous experts take advantage of its flexibility to adopt the interest-based approach in settling conflicts as it guarantees a win-win approach for involved parties.

2.5.2 Mediation as a method for conflict resolution

Mediation is the process, whereby, an impartial outsider usually called a third party, helps conflicting parties arrive at decisions, mutually beneficial to all parties' interest without imposing any decision on them (Abban, 2017). Mediation, just as negotiation is a voluntary process and parties have the choice to choose their own mediator performing the roles of an impartial third party guiding involved parties to land at genial terms of settlements.

The mediator's definitive objective is to guarantee mutual benefits for all parties by adopting an interest based approach of resolving conflicts (ibid). This is accomplished by urging parties to focus on their needs and what they seek to gain at the end of the mediation process. Disputants on the other hand have the power to share in the process by selecting the date, time, venue and agenda for the meeting with the assistance of the mediator. After the parties and the mediator have decided and agreed on the rules necessary for mediation to take place, the mediator begins with the mediation process (Nolan et al., 2014). Mediation in this manner takes an increasingly formal and sorted out procedure in comparison with the negotiation process. Acting in the capacity of a mediator is a technical job and requires all the gained skills and tools to help disputants to resolve their conflict (Abban, 2017).

Stipanowich (1997) claims that alternative dispute resolution, in particular mediation, is the most popular and familiar of settlement-oriented options among contractors, architects and lawyers, and emphasizes that its notoriety has all the characteristics of being an instant replication of the comparatively favorable experiences of all these disputants in the process. Construction attorneys see mediation as a practically efficient strategy to achieving a broad variety of objectives in terms of price and length of dispute resolution, and this depends on where parties can agree to mediate after conflicts occur.

2.5.3 Conciliation as a method for conflict resolution

A few contracts incorporate plan of action to a conciliator empowered or required to express his provisional view on the merits of the case (Uff 2005; p62). In page 190 of the publication, “Critical factors affecting the use of alternative dispute resolution processes in construction” Cheung (1999) states that Conciliation and Mediation are very similar in both nature and process. Conciliation, just as mediation also rely on an impartial party known as the conciliator to assist in the resolution of their conflicts (Abban, 2017). In Ghana however, conciliation is unique in relation to mediation. With conciliation, the conciliator helps resolve the conflicts by meeting the conflicting parties separately to help them resolve their differences through a purpose called caucusing (Abban, 2017). Conciliators utilize their technical expertise to resolve the conflict by reducing tensions between parties. As per Street (1992), conciliation appears to be the ideal choice in international and European usage.

2.5.4 Arbitration as a method for conflict resolution

According to Nanevi (2018), a mediator at Ashaiman Inter-Community Mediation Centre, Arbitration refers to the process by which a neutral party known as an arbitrator helps the

disputants to arrive at decisions. The choices and decisions are however binding on both parties. Arbitration is employed as an ADR method in settling commercial cases especially.

Parties have the power to designate an arbitrator. An arbitrator is a person who parties trust and respect his judgments. Arbitration is a voluntary process. Nevertheless, one party cannot unilaterally resolve to withdraw from an arbitral process rather it is a consensual process. Decisions arrived at are binding and usually easy to enforce (WIPO, 2018). A judge can also allude an issue in court for arbitration depending on the nature of the case. In such instances, after the case has been settled, the arrived terms of settlement must be referred to the Judge at a specific given date but on failure to come to an agreement, the case is taken to trial.

Brooker and Lavers (1997) argue that the most obviously expressed view of ADR's suitability for settling building disputes is that it is moderately quick and shabby when compared with litigation and arbitration, and that ADR is considered to save management time by 61%. Nevertheless, they likewise distinguished the non-restricting nature of ADR as a detriment.

Ellison and Miller (1995) have shown that ADR techniques are gradually becoming fundamental in the construction industry to resolve conflicts. By settling conflicts in a timely way, the landlord has a superior consideration of his last expenditures, and the contractor is even more accurately aware of his costs, as-built schedule and earnings. In addition, as the contractor has experience with the idea, contingencies and legal costs in future tend to be lowered by the dispute review boards (Kohnke 1993)

2.6 FACTORS THAT EXPEDITE THE SELECTION OF A RESOLUTION PROCESS

Determining a rational dispute resolution technique is a matter of particular significance. This is so for a few reasons: firstly, dispute resolution involves comprehensive legal, financial, engineering, technological, etc. understanding; secondly, conflicts often halt project development; thirdly, it is very crucial for the sides to dispute that their conflicts have a minimal impact on their future business relations.

Dispute resolution problems are usually big and complicated, involving many stakeholders, often with significantly different convictions and values. The contestants' decision to justify the choice to find a rational alternative is very crucial. Parties included in the conflict are faced with issues of selection, i.e. which procedure is best for decision-making, in order to select the most preferable technique of a dispute resolution technique.

Numerous analysts and experts have explored the traits of ADR techniques. York (1996) was concerned with the practical issues and identified time, enforceability, degree of control by parties, cost and preservation of relationships, Procedural flexibility and confidentiality as variables affecting the selection of dispute resolution methods. David (1988) concentrated on problems of social and human nature such as impartiality, agreement, and ongoing business relations.

Cheung et al (2002) carried out a survey on the basics of alternative dispute resolution procedures in construction. In the study, a hierarchical model was developed to organize attributes of ADR processes. They then used an analytical hierarchy process methodology by a panel of experts to prioritize ADR process attributes. They identified ten criteria as the most common factors which affect the performance and selection of dispute resolution methods. These were cost, openness, neutrality and fairness, speed, outcome, privacy and

confidentiality, enforceability, preservation of relationships, flexibility, creative remedies and degree of control

2.6.1 Cost of resolving the conflict

Dispute resolution expenses require settlement contracts, including paperwork, revenue-related expenditures, neutral third-party fees, and settlement costs. Cost is one of the most fundamental and critical criteria when evaluating which technique of dispute resolution to be used to resolve disputes as it impacts the profit share of the project result. A cost-benefit analysis of the cost and value of the case must be conducted in assessing the appropriateness of a case for ADR. This includes trading off the different criteria held by the sides, which in turn enables them to better comprehend the problems concerned and the expenditure that could be incurred if the conflict continues. (Cheung et al., 2002).

Williams (2019) in his article, “Cost effective conflict resolution” writes that as a general proposal, the arbitration method spends approximately half the time and cost litigation process. However, if the party concerned and its attorneys determine that pressing ahead with the litigation and incurring the costs will considerably boost the recovery advantages, then proceeding with the litigation makes sense. But if they play in a zero sum game, the only reasonable choice is to mediate the conflict to a quick conclusion. No one can justify spending money with just one downside to play a game.

2.6.2 Openness, Neutrality and Fairness of the neutral parties and process

Neutrality and fairness rely heavily on neutral third parties' ability, training, and integrity. She Ling-Ye (2012) performed a survey in which she compared the Dispute Review Board with other techniques of alternative dispute resolution. This was to identify factors which impact upon the selection of Dispute Resolution methods for commercial construction in the Melbourne industry. Speaking of neutrality and fairness, she writes that the third parties

owe their customers an obligation of care to stay honest and impartial during the resolution phase. He or she promotes settlement by the sides, but must make a conscientious effort to prevent private biases. This neutral individual must have no professional or economic connection with any involved parties otherwise the data must be communicated to the other party.

Finally, both parties must agree on the neutral third party. Given the basic importance of choosing the neutral third party, there must be a set of values for monitoring the standard of skilled mediators, conciliators and arbitrators (She Ling-Ye, 2012). This will increase the amount of confidence and convenience between sides in order to achieve a settlement on a voluntary basis.

2.6.3 Speed of the resolution Process

There is a general perception, according to lawgovpol.com, that ADR is more effective than legal action. Because courts usually have a large backlog of cases, some civil disputes may be scheduled for months or even years. Ling-Ye (2012) argues that in the business and project management world time is money. Extensive postponement or delays in the resolution of disputes will delay work progress leading to additional costs and potential penalty points.

National and European legislation stipulates that the dispute resolution center should resolve the dispute within 90 days of receiving the complaint form and all relevant documentation. In addition, if the dispute is complicated, it provides for an extension.

According to ralphwilliams.com as written by Williams (2019), arbitration and mediation takes about half the time of litigation process. ADR can be organized and conducted much more quickly, especially if the parties in dispute use a method that does not require third party involvement.

2.6.4 Outcomes of the resolution process

A court trial's general perception is that there is a "winner" and a "loser." Typically, the result of a construction dispute is a cost obligation. The party initiating the conflict is of the opinion that the other party owes expenses for reasons such as payment variations, quality of workmanship and final payments or owes compensation expenses owing to variables such as work delays, time extension payments and liquidated damages (Ling-Ye, 2012). ADR's results are not necessarily that black and white; an agreement can be reached that is at least partially appropriate for both sides or, if there is a 'loser,' he or she may at least have a stronger knowledge of how the choice was reached.

2.6.5 Privacy and Confidentiality of the conflict resolution process

In other words, confidentiality is an implied and inherent feature of ADR processes that parties to a dispute are not permitted to disclose any information or material to the public unless there is mutual consent of the parties (Ling-Ye, 2012).

In general, however, confidentiality can be established with regard to what happens in an ADR process, the outcome of an ADR process (e.g. mediation agreement or arbitration award), either or not. In addition, some ADR participants may be bound by privacy while others may not. Similarly, some participants may be able to claim a privilege so that testimony or evidence about what happened in the ADR process cannot be brought to trial.

The confidentiality feature in ADR varies extensively from process to process. Confidentiality, for example, is essential to mediation, while arbitration is not essential. Despite its centrality, mediation results may or may not be confidential in some instances.

2.6.6 Enforceability of results from conflict resolution proceedings

As per the Resolution Systems Institute (RSI), enforceability is another conflict resolution factor examining whether the outcome of the ADR method is binding or non-binding, i.e.

whether or not the parties are needed to conform to it. While this may appear to be just two choices, extra possibilities exist. For example, guidelines for court arbitration programs may put pressure on parties to approve awards after considering the expenses of dismissing an arbitration award. These kinds of expenditures may make parties less likely to contest a result once they consider the barriers to bringing the case back to court.

On the other side, mediation is usually regarded as a non-binding process because it is entirely voluntary whether the parties reach an agreement. However, mediation contracts typically involve the components of an agreement. Consequently, mediations reaching agreement will most probably be binding to the same extent as a contract. Therefore, ADR dispute resolution methods are generally non-binding, so a written contract should have been found for it to be implemented by the judiciary.

In addition, selecting a skilled neutral accelerator with outstanding negotiating abilities can encourage parties to settle by making the findings binding. (Ling-Ye, 2012).

2.6.7 Preservation of Relationships between the parties to a conflict

One of the key elements for any organization to strive for is a continuous relationship. A good relationship is always based on trust, fundamental interests and respect, and requires the parties ' commitment and duty to make it last (Ling-Ye, 2012). ADR methods allow parties to negotiate the dispute resolution process and the neutral person helps both parties to consistently focus on the dispute issue and try to achieve a win - win situation that is crucial to the construction industry as it relies heavily on relationships.

Lawgovpol.com stresses that using ADR techniques in conflict resolution can assist parties who have to live or work together or interact after the dispute has been settled. Companies

that are in conflict but want to maintain trading can also discover an efficient way for ADR to find alternatives while maintaining its company relationship.

2.6.8 Flexibility of the conflict resolution procedures

According to lawgovpol.com, civil proceedings may create, exacerbate or increase current tensions and feelings of illness between the sides to the dispute. Courts are adversarial by their very nature, with intensive examination of witnesses, allegations and charges. ADR can reduce tensions by providing for a forum that is more informal and conducive to problem-solving.

If the parties in dispute are extremely hostile, some ADR techniques enable them to interact through negotiators, avoiding face-to-face contact and thus avoiding conflict. As it is more flexible than traditional techniques, the non-binding nature of ADR techniques is likely to encourage collaboration between all parties to achieve an agreement through negotiation. This may offer them more chance to say their side of the tale than in a trial. It also enables more creative remedies than those accessible to a judge or magistrate.

2.6.9 Creative Remedies

Creative agreement is directly linked to a neutral third party's abilities, experience and intrinsic personality (Ling-Ye, 2012). Contingent upon the nature and prerequisites of the parties, the individual should attempt to think of solutions that can fulfil the two parties' needs. Settlements can integrate human factors such as company links and individual problems. The facilitator considers that lateral thinking is essential as it takes into account the multiple factors before reaching a settlement (Ling-Ye, 2012).

2.6.10 Degree of Control

In a civil trial and litigation, court procedures and processes such as discovery, the rules of evidence, standards of proof and so forth are fixed – they are determined by legislation, precedent and convention and cannot be changed. In ADR, however, the parties in dispute are in control of the process, and not bound by court procedures. The parties typically play a greater role in shaping both the process and its outcome.

In most ADR processes, parties have more opportunity to tell their side of the story than they do at trial. Some ADR processes, such as mediation, allow the parties to fashion creative resolutions that are not available in a trial. Other ADR processes, such as arbitration, allow the parties to choose an expert in a particular field to decide the dispute. When parties feel in control of the outcome and processes involved in reaching an agreement, it will also mitigate the adversarial climate between disputing parties (Ling-Ye, 2012)

Moreover, Sander and Rozdeiczer in a chapter in *The Handbook of Dispute Resolution* (Moffit et al., 2005), advise parties to a conflict to answer three questions, based on the type of dispute you are facing, to ensure that you choose the right method.

The first question to ask is “what are my goals?” Simply knowing what the disputant wants to get out of the dispute resolution process can help him or her decide where to start. As such, it begins by prioritizing goals. For example, where one wants to jointly hash out an agreement with the other party as inexpensively as possible, it seems clear that mediation is the best choice for such dispute, due to its relative speed and low cost, and the fact that it gives parties the greatest degree of control over the final outcome.

By contrast, a person who feels he is the victim of age discrimination by his former employer, has the primary goal of winning a large financial settlement. Thus, he may want

to start with arbitration. If this person further wants to set a legal precedent that could benefit others, he might turn to litigation instead. In both instances, he would do well to listen closely to his attorney's assessment of his odds of winning the case and a large settlement. In instances where the parties cannot agree on goals, Sander and Rozdeiczer (ibid) advise they start off with mediation, as it is a safe, non-binding procedure for both sides.

The second question was "which process will capitalize on the best features of the dispute?" Every dispute has features that can help the parties reach a beneficial outcome (Moffit et al., 2005). Which process will best trigger the strengths of the case? The authors identified a number of dispute features that lend themselves well to mediation, including a good relationship between parties and their counsels, opportunities for creative problem solving, and eagerness to settle quickly. By contrast, if a party would benefit from formal protections, such as enforcement of key decisions, then arbitration or litigation might be a more fitting option.

The final question was "which process will best overcome barriers to resolution?" the clue was to consider the ability of the different dispute-resolution methods to help you overcome barriers to settlement. When parties are having trouble communicating and have a strong desire to air their feelings, mediation is often the best choice (Moffit et al., 2005). When more than two parties are involved, such as other relatives in the case of a custody dispute, mediation might also be optimal, as it allows multiple parties to be involved. However, when parties have different opinions regarding the law affecting their case, a judge or arbitrator's expertise ultimately may be needed.

While the findings from the above studies offer valuable insight, there is clearly a need for further studies concerning the factors that facilitate easy conflict resolution, more

particularly the choice and handling of dispute resolution processes concerning construction projects within Greater Accra. It needs to be clarified which factors disputants to a construction conflict see as important for the settlement of such disputes.

2.7 CHAPTER SUMMARY

The literature review presents studies as made by various researchers including cheung and others. An empirical review revealing some existing findings on major sources of conflicts regarding some construction projects, the various resolutions methods that have been established and being used by disputants and the finally, the factors the inform disputants choice of resolution method. With most of the previous studies focusing on the sources and effects of conflict and the various methods available to deal with them, it gives reasons for further research on the factors the impact on the easy facilitation of construction disputes.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Researchers are boundless to varieties of methods they can employ in undertaking research, nevertheless the technique to be employed must of essence depend on the research design, philosophy and strategy. The very motivation behind the choice of a particular method of executing the research is for the process to be systematic, scientific, and as much as possible free from biases. The chapter outlines the study strategy assumed or accepted and then presents the population, the sampling design and sample size, the data collection tools and processes, and the data analysis tools and procedures employed.

3.2 RESEARCH DESIGN

Citing the second edition of *Basics of Social Research: Qualitative and Quantitative Approaches* as written by Neuman (2007), there are three (3) main techniques used when carrying out a research namely; quantitative, qualitative and mixed method. Saunders, Lewis and Thornhill (2007) in their fourth edition, *Research Methods for Business Students* make it clear that a particular design may very much be dependent on the assumptions in respect of the nature of information and actuality, and how an individual discerns knowledge and actuality, in addition to the procedure of obtaining knowledge about reality. And based on the aim of this research, quantitative research design is suitable. Quantitative method allows for the study of large populations and permits numerical analysis founded on facts collected through surveys and experiment (Saunders et al., 2007).

A cross-sectional survey method is deemed appropriate for this research due to time constraints and information will gathered via administration of questionnaires. The survey

will apply standardized analytical instruments, in order that the changing viewpoints and experiences of participants will suit a restricted number of scheduled response categories, to which numbers will be allocated and measured statistically. Since it is a survey study, a sample will be taken and inferences about the population will be made out of the outcomes. (Neuman, 2007)

3.3 STUDY POPULATION

Based on the subject of the research and the need for diverse views across the construction industry the least in grade to the highest in grade of building and construction will all be included in the target group. The focus of the study is placed on the stakeholders in the construction industry in Ghana who carry out project specifically in Accra. The stakeholders are mainly clients, project managers, contractors, sub-contractors, suppliers, engineers, Monitoring and Evaluation officers, Quantity Surveyors and architects within the reach of Greater Accra. This research focused on factors for conflict and easy resolution of construction projects of MMDAs within the La Dade-Kotopon Municipality, Shai Osudoku District, and Ningo Prampram District. These MMDAs were selected as the geographical location for the study due to the fact that the researcher resides closer to two of the above-mentioned MMDAs and will be able to readily access data as quickly as possible. Moreover, a lot of construction works are evident to have sprung up within these areas.

3.3.1 Profile of La Dade-Kotopon Municipal District

La Dade-Kotopon Municipal Assembly forms part of the 29 MMDAs in the Greater Accra Region and is one of the 260 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana. The government in 2012 created la Dade-Kotopon Municipal Assembly.

Formerly, the whole area some years before the creation of the Assembly, used to be known as La Sub Metro, which was part of Accra Metropolitan Assembly. Further, back in the 1990s, when the AMA was created, the area existed as part of Kpeshie, one of six Sub Metros of the Assembly. Osu-Klottey Sub Metro, also of AMA, circumscribes la Dade-Kotopon Municipal Area (Assembly) in the north by Ayawaso-East and Ayawaso-West Sub Metros of Accra Metropolitan Assembly, AMA; in the east by Ledzokuku-Krowor Municipal Area (Assembly), LEKMA; in the south by the Atlantic Ocean and in the west.

The Assembly has a population of 183,528 (*2010 PHC*), with the following age distribution: 0-14years, 54,142; 15-64years, 122,295; and 65+years, 7,091. Kotoka International Airport, La Pleasure Beach and the Kpeshie lagoon, are some landmarks in the Area.

3.3.2 Profile of Shai Osudoku District

Shai Osudoku District is also one of the 260 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana, and counted as one of the 29 MMDAs in the Greater Accra Region. The Shai Osudoku District which was formerly known as Dangme West is situated in the Southeastern part of Ghana, lying between latitude 5° 45' south and 6° 05' North and Longitude 0° 05' East and 0° 20' West.

The District was carved out of the former Dangme District in 1988 at the national time of a re-demarcation implementation carried out in relation to decentralization reforms in the

country. Dodowa is the Administrative Capital of the District. The District shares boundaries with Yilo Krobo Municipal, Lower Manya Krobo Municipal and Asuogyaman District to the north respectively. Coming to the east, the district shares boundaries with Ada West District, to the south with Ningo Prampram District and to the west with Akuapem North Municipal and Tema Metropolitan respectively. According to 2010 population and housing census, the population of the District stands at 51,913 with 25,292 males and 26,621 females.

3.3.3 Profile of Ningo Prampram District

The Ningo Prampram District also forms part of the 29 MMDAs in the Greater Accra Region and is also one of the 260 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana. Ningo Prampram District with its capital **Prampram** was created out of Dangme West (Now Shai Osudoku). It is part of the new Districts and Municipalities created in the year 2012 and inaugurated at their various locations simultaneously on the 28th June, 2012 by the LI 2132 and the Local Government Act of 1993(Act 462).

Ningo-Prampram District covers a total land area of about 622.2 square kilometers.

The District is cited about 15 km to the east of Tema and about 40 km from Accra, the capital of Ghana. The District is bounded in the north by Shai Osudoku District, south by the Gulf of Guinea, in the east by the Ada East District and to the west by Kpone Katamanso District. The population of the District according to 2010 population and housing census stands at 70,923 with 33,514 males and 37,409 females.

3.4 SAMPLING TECHNIQUE AND SAMPLE SIZE

3.4.1 Sampling

For this study, both snowball and purposive sampling techniques will be worked with. Purposive sampling by Neuman (2007) is described as the form of non-probability sampling in which results of the individuals to be included in the sample are taken by the researcher, based on a variety of measures, which may include knowledge of the research issue and their readiness and capacity to participate in the research. For this study, the purposive sampling technique will involve contacting those that have experience working in the construction industry.

Snowball sampling as explained by Neuman (2007) is a procedure for gathering research participants through the identification of an initial subject who then provide the names of other participants. These participants may by themselves open possibilities for an increasing web of contact and inquiry. Given that the researcher is not previewed to all respondents, the snowball sampling technique was adopted in selecting other respondents for the research. The reason for utilizing the snowball technique is the inability to easily locate respondents whose office or the researcher cannot locate places of work with ease because of structural planning problems within the scope of the study.

3.4.2 Sample size determination

To ensure a broad representation of participants from respondent and also to avoid errors associated with the usage of extremely large data size some of which includes issues with significance of analytical results and situation of not being able to analyze thoroughly the responses gathered from the administered questionnaire. However, with no adequate information on the study population, the purposive snowball sampling technique was used. Hence, 60 questionnaires were administered out to participants and 51 were retrieved.

3.5 DATA GATHERING

Data collection is the practice of collecting and assessing information on targeted variables in an established and systematic order, which enables a researcher to find answers to relevant questions and evaluate outcomes (Cooper and Schilndler, 2006). The information or data needed for the study will be generated from both primary and secondary data. The primary data as explained by Hussey and Hussey (1997) in “A Practical Guide for Undergraduate and Postgraduate Students”, are data collected on site, in other words from the field and secondary data are data gleaned from existing writings. Both primary and secondary data are used in this study.

The theory based discussion done in chapter two of this study was acquired from existing literature or secondary sources from journal articles, and web sites of professional bodies, databases and books. The primary data on the other hand will be garnered from the field using the data gathering tools like questionnaire survey, from which the key findings and results emanate.

3.6 QUESTIONNAIRE DEVELOPMENT

In research, one technique used in gathering data is the use of questionnaire survey. Questionnaires are highly structured way of collecting specific information as a reply to highly directed questions. Researchers including Al-Assaf (1995) asserts that questionnaires have the advantage of increasing the generalization of data collected while at the same time granting respondents the liberty to express their views or opinions.

The study data thus will be gathered through questionnaire survey. Questionnaire survey was considered fitting because is cheaper and less time consuming compared to conducting an interview, also 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 will be formed from existing literature and the writings. The questionnaire is structured in sections, that is, the demography level, causes of conflict level, assessment of methods of resolution and management of conflict and finally factors for the selection of a particular method. The questions are close-ended questions. 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 structured questionnaires will thoroughly be checked to confirm it is unambiguous, lucid and well understood. Pilot testing the sample questionnaire with three projects initially in Accra and reviewed to correct any vagueness and replications will achieve this. This is to make sure that responses from participants are in accordance with the purpose of the study.

Before administering the questionnaire, the researcher will brief participants about the study purpose and expectations. Anonymity and confidentiality of participants are guaranteed by the nature of the survey.

3.6.2 Measurements

The study questionnaire to be administered will measure the objectives of the research. The first measure is on the sources of conflicts. Respondents will be tasked to show the degree to which the items outcome in conflicts on five (5) point Likert scale where 1 represents very insignificant, 2 represents significant, 3 represents neutral, 4 represents significant and 5 represents very significant.

The next measure is on the assessment of conflict resolution methods with emphasis on its efficiency, effectiveness and satisfaction gained for using alternative dispute resolution (ADR) methods of dispute resolution. Respondents were tasked to specify the assessment on a Likert scale where 1 signifies Never, 2 signifies Sometimes, 3 signifies Neutral, 4 signifies Always.

Also, the questionnaire sought to tease out experience by allowing participants to freely surmise their view on conflict issues. Finally, respondents are asked of the approach be it negotiation, mediation, conciliation, arbitration or litigation they would resort to and rank the factors which will inform them to opt for a particular approach.

3.6.3 Ethical and general considerations

Welman et al. (2005) elucidated the essence of ethical considerations and behaviour are in research as they are applicable in all other fields of human activity. Essentially, the rights of participants should always be respected at all times (Cohen et al., 2004).

Consequently, the respondents were assured that their privacy would be preserved to elicit responses without fear or intimidation (Badu et al., 2013). The ethical factors considered are shown in the table 3.1 below.

Table 3.1 Ethical considerations; Source: Welman et al. (2005)

Competence	A researcher should not embark on research involving the use of skills in which they have not been adequately trained. Doing so may risk causing harm to subjects, abuse a subject's goodwill, damage the reputation of the research organization, and may involve a waste of time and other resources.
Plagiarism	The use of other people's data or ideas without due acknowledgement and permission where appropriate is unethical.
Falsification of results	The falsification of research results or the misleading reporting of results is clearly unethical.

3.7 DATA PRESENTATION AND ANALYSIS

Statistical Package for Social Scientist (SPSS 16.0) and Microsoft Excel are the two software tools that will be used in analyzing the data collected. Although a number of software are available for such research computations, the researcher's adeptness in SPSS and Excel makes the two tools the researcher's favored choice. SPSS will be used to perform descriptive statistics and frequency analysis while Microsoft Excel will be used to produce the charts that are generated to depict findings. Mean values derived from the measurement of the items and the relationship between the variables will be established.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

This chapter analyzes the responses obtained from respondents to reflect the objectives of the study as well as the demographic characteristics of the respondents. The findings are also structured into four sections and presented in the body of frequency distributions, descriptive statistics, chart and tables to expedite examination and analysis of the patterns of the responses.

4.2 DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Sixty (60) questionnaires were distributed via online. Fifty (51) responses were received and thoroughly checked for completeness representing a response rate of 85%. Out this total, nine (9) respondents were females representing 17.65% and forty two (42) being males representing 82.35%. The age brackets as identified had 55% of respondents being within the ages of 25 to 35, 41% within the ages of 36 to 45 and 4% within the ages of 46 to 55. The participants predominantly consisted a hundred percent Ghanaians.

The proceeding figures depicts the educational level, work classification and period of work of respondents who responded to the questions for the study.

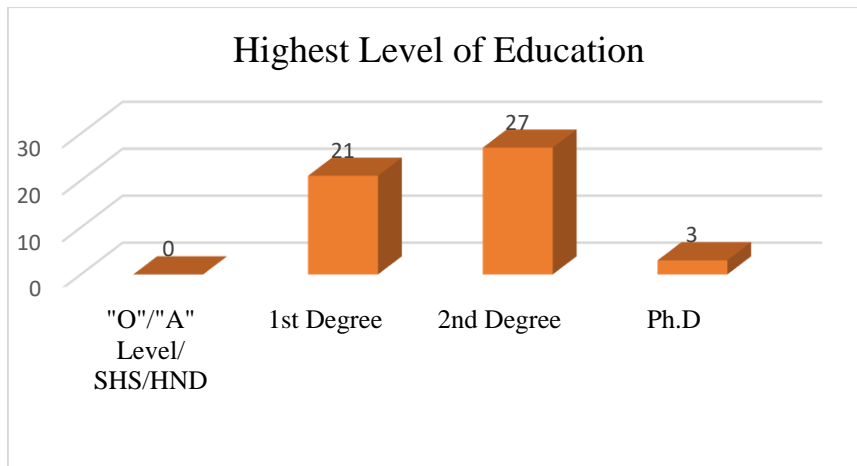


Figure 4.1 Highest level of Education

Source: Field survey 2019

Focusing on the level of education of the participants, the survey (Table 4.1) reports 21 respondents holding First degree in construction representing 41.18%, 27 of them holding Second Degree representing 52.94% and only 3 holding Ph.D which is 5.88%. None was an “O”/”A”Level /SHS/ HND equivalent Certificate Holder. This indicates that respondents are erudite in project management and its related activities with the industry.

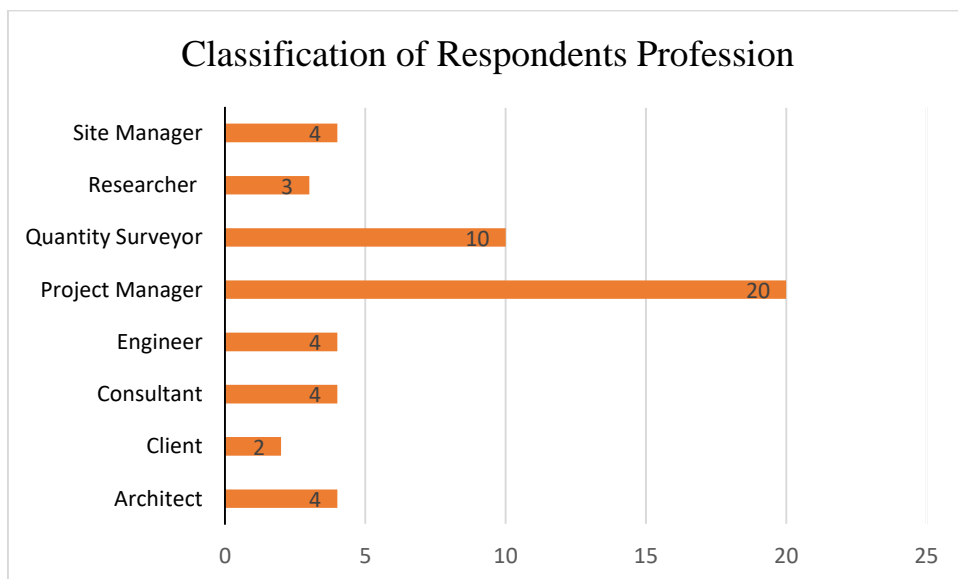


Figure 4.2 Classification of respondent profession

Source: Field survey 2019

In order to be certain that the questionnaires were completed by the respondents who were actually targeted, respondents were asked to indicate their profession. From the survey, Site Managers were 4 representing 7.84%. Engineers, Consultants and Architects were also 4 each representing 7.84% of each profession. Most of the respondents were into Project Management totalling 20 and representing 39.23% followed 10 respondents being Quantity Surveyors also representing 19.61%. Only 2 of the respondents were clients and bearing a percentage of 3.92%.

Closely related to the respondent's classification of profession is their level of experience in or with the construction industry. The participants of this study hold years of work experience oscillating from less than a year to 16 years and over. Out of the 51 participants of this study, 3.92% of them had less than a year's work experience in the industry, likewise 15.69% have worked for 1 to 5 years, and 25.49% also have been in the industry for 6 to 10 years. 37.25% also date theirs from 11 to 15 years and finally 17.65% of the participants representing the most experienced, have worked for 16 years and over.

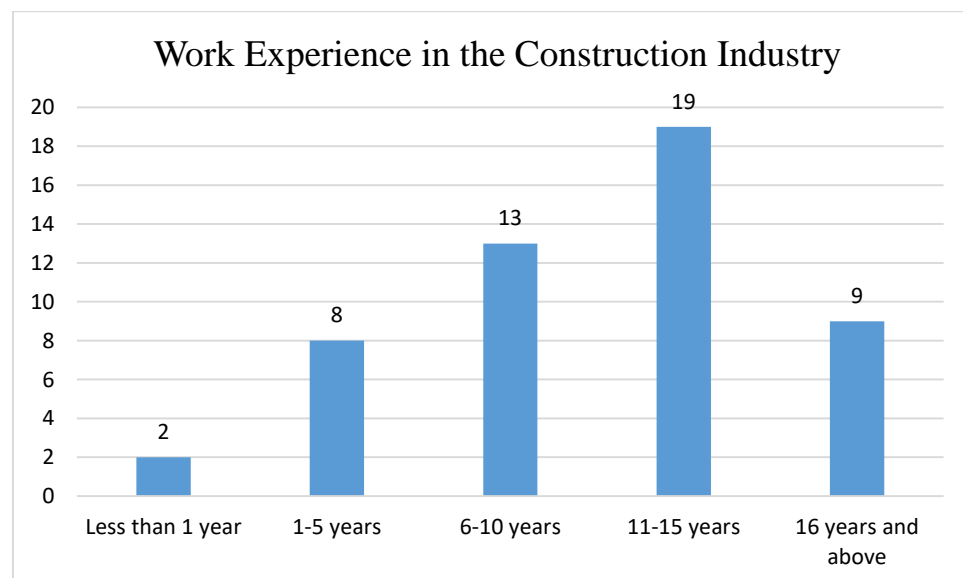


Figure 4.3 Respondent work experience in the construction industry

Source: Field survey 2019

Making inferences from the responses received, 80% of the participants have operated in or with the construction industry for 6 years and over. While 20% of the respondent have also operated for periods less than a year to 5 years in the rigorous environment. The entire number of people involved the study were identified to be learned and capable of giving credible answers to the questions asked. Their level of education reflected the kind of responses they gave in the sections concerning major sourcees of construction conflict, assessment of effectiveness, efficiency and satisfaction of ADR and pertinent factors that play roles in the selection of a method to dissolve disputes in the industry. Their responses can therefore be relied upon to make references and further studies.

4.3 IDENTIFYING THE MAJOR SOURCES OF CONFLICT AFFECTING CONSTRUCTION CONTRACTS IN GHANA

A major objective of this survey was to identify major sources of conflict posing threats to construction activities within the La Dade Kotopon, Shai Osudoku and Ningo Prampram Districts. A list of conflict causers was probed through construction industry players. To be able to help pinpoint the various springs of conflict, the study presented in the questionnaire 15 number items representing causes of conflict and asked participants to rate the significance of each of the causes as they occur. This was to elicit from the participants their thoughts on which variables among the 15 listed, caused construction disputes often in the construction sites in the Greater Accra Region. The “mean values” obtained after analyzing the responses of the participants in respect of major sources of conflict in the study can be accessed in Table 4.1.

According to the results, respondents acknowledge each of the variables listed under the major sources of conflict, to indeed cause conflict in the construction areas cited. The

number of times a specific item or conflict cause occurs has been ranked using their mean scores. Using a 5 point Likert scale measure used in the questionnaire, the mean values that evolved when approximated were as follows; mean value of (3.0) corresponding to “Neutral” and mean value of (5.0) corresponding to “Very Significant”.

Table 4.1 Descriptive Statistics of Major Sources of Conflict in Construction Projects.

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Ranking
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	
Inaccurate design information	51	4	1	5	4.20	.170	1.217	1st
Inadequate communication among project teams	51	4	1	5	3.98	.187	1.334	2nd
Delayed client response (decisions)	51	3	2	5	3.94	.144	1.028	3rd
Idealistic time targets and durations	51	4	1	5	3.86	.179	1.281	4th
Poorly developed project plan and scheduling	51	4	1	5	3.84	.193	1.377	5th
Delays in payments (mobilization, part payment)	51	4	1	5	3.84	.167	1.189	6th
Inadequate site investigations	51	4	1	5	3.84	.147	1.046	7th
Withheld or non-payments	51	4	1	5	3.80	.170	1.217	8th

or disputes over payment								
Ambiguous and contradicting instructions	51	4	1	5	3.76	.162	1.159	9th
Project members reluctant to pact promptly with changes and unexpected conditions - price escalation index	51	4	1	5	3.73	.177	1.266	10 th
The use of substandard materials for construction	51	4	1	5	3.65	.163	1.163	11th
Excessive change orders	51	4	1	5	3.57	.186	1.330	12th
Contractor submits idealistically low bid to win the project	51	4	1	5	3.45	.206	1.474	13th
Slow progress and performance by Contractor	51	4	1	5	3.35	.183	1.309	14th
Different perception of work quality	51	4	1	5	3.31	.183	1.304	15th

Source: Field survey 2019

The analyses were based on the responses of the participants. Each item listed under general causes of conflict had the mean values ranked to ascertain the highest cause of conflict in the study area. According to the results in Table 4.1, one (1) item produced the highest range of mean scores.

However, approximating the mean scores presented in the table, eleven (11) variables add up to the very first variable making it twelve (12) significant sources of conflict. The next highest range of mean values without approximation were in the domain of “Neutral” and accounted for fourteen (14) variables. This meant that the items listed were very basic and predisposes construction of buildings to conflict. And from the ranking the most regular cause of conflict as per the respondents in the study area was identified. Referring to Table 4.1 the variable discovered to be causing most of the conflicts in construction projects was inaccurate design information. Having the highest mean value of 4.20 meant it was the highest causative agent of conflict in the construction developments within the 3 districts identified in the Greater Accra Region. Designs are the blue prints of every construction project and forms the foundation of monuments and state of the art structures. Anytime an inaccurate design information is given, it affects and prevents the possibility of bringing out the very desired and true reflection of structures as envisioned. Occasions where inaccurate design information is handed over for execution with due diligence may cause a whole of effects and overruns which often lead heated up disputes.

The next in line according to the findings (Table 4.1) was inadequate communication among project teams with a mean value of 3.98. Communication performs very crucial roles in all the various phases of construction starting from design, organization, production through to management. For a particular project to be deemed successful the role of communication cannot be overlooked as various professionals in the construction industry would need to communicate effectually. It is also evidently proven that a poorly organized communication does not only lead to misunderstanding and eventual conflict but also design and construction errors, a slowdown in work progress, demotivated labour force and failure in production (Tipili et.al., 2014).

The third cause of conflict according to the finding in Table 4.1 is delayed client response especially in decision making with a mean value of 3.94. As projects progress there may be the need for radical changes to be made or some findings on site may require changes to the design that may or may not be eyebrow raising.

Moreover, there may be the need for procurement of materials which initially had not been factored in the design and for that matter may require an affirmative response from either the client or the owner. The absence of such affirmative responses lead to cost increments, time extensions, disputes and to some extent total desertion.

According to Table 4.1, the variable with the smallest mean value is “Different perception of work quality” with a mean value of 3.31 following after the item “Slow progress and performance by the contractor” also with a mean value of 3.35. The mean values of the two variables at the foot of the others meant as per the responses of the participants that the two variables were the least causative agents among the others grouped under the General causes of conflict. It is worth noting that, though these 2 items find themselves at the bottom of the listed items per the measure and comparison of their means to the other items, they are equally significant to causing conflicts in the various District Assemblies under study in the Greater Accra Region. (Table 4.1)

4.4. ASSESSING CONFLICT RESOLUTION METHODS EMPLOYED IN RESOLVING CONSTRUCTION CONFLICTS

In order to assess the various conflict resolution methods being used by the various constructions players and stakeholders, there was the need to first ascertain the number of times the respondents had encountered contractual disputes in the years of their work and the methods which they usually employed to handle or settle those disputes as they

occurred. The findings are presented below in relation to the number of times they have encountered disputes and the method employed to handle them.

According to Figure 4.4 being a summary of responses from the participants, 12% had not faced any disputes as of the time they started working in the industry. 8% had encountered disputes estimated from 11 to 20. Most of the respondents recorded encountering a couple of disputes ranging from 1 to 10 with a response rate of 80%. None of them recorded recurrent dispute at 20 and above.

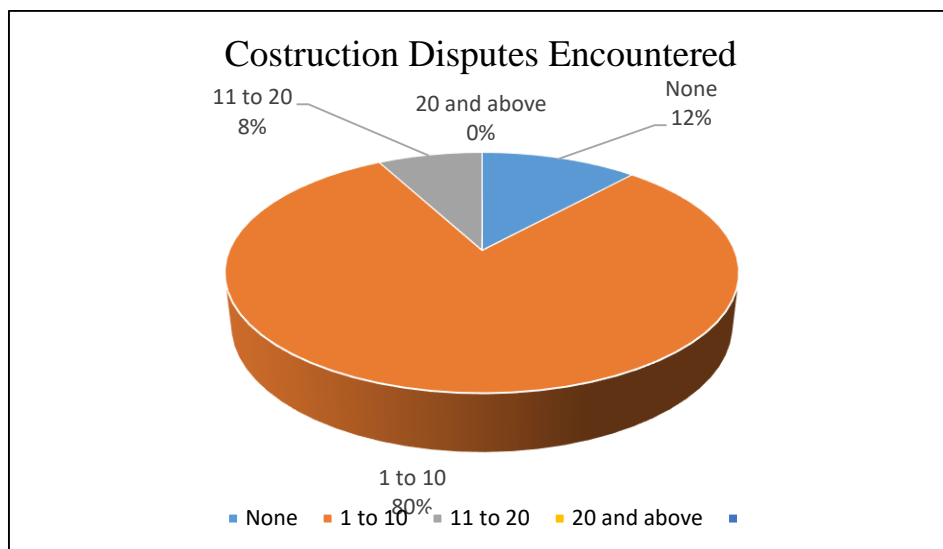


Figure 4.4 Construction disputes encountered

Source: Field survey 2019



Figure 4.5 Respondent usual method of conflict resolution

Source: Field survey 2019

As shown in Figure 4.5, the most used method of conflict resolution in the districts of study was Mediation having total responses of 25 and representing 49.02%. this is followed by Arbitration with a total of 13 responses and representing 25.49%. Negotiation came third with a percentage of 17.65 and then followed by conciliation with 3.92%. Another method suggested by two of respondent was the obedience to the provisions made in case of disputes and execution of such terms and conditions. It also had a percentage of 3.92

Table 4.2 Descriptive Statistics of Assessment of Method of Dissolving Contractual Conflict.

	N	Range	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Std. Error	Statistic
The use of ADR is less costly than the use of traditional means of resolving dispute.	51	2	2.75	.128	.913
Disputes resolved are quick using ADR, compared to traditional means of resolving dispute.	51	3	2.94	.136	.968
[ADR resulted in a greater number of settlements.]	51	2	3.14	.122	.872
The use of ADR results in further litigation activities.	51	3	2.16	.144	1.027
Outcomes differ according to the type of ADR process used.	51	2	2.90	.102	.728
ADR results in greater compliance with settlement agreements.]	51	3	2.82	.124	.888
ADR reduces levels of dispute recurrence, eg. recurrence of disputes among the same parties.	51	2	2.75	.122	.868
ADR have an impact on the types of disputes that arise regardless of its intensity	51	3	2.75	.118	.845
ADR has got negative impact, in diagnosing and correcting systemic problem/issues	51	2	2.00	.112	.800

Access to ADR, and its fairness in procedure and treatment of parties by 3 rd parties (third parties) is easy and appropriate	51	3	3.06	.130	.925
Matching decisions with respect to a particular ADR process to specific cases are appropriate.	51	2	2.69	.110	.787
ADR facilitates the generation of settlement options (i.e. the quantity and reliability of information exchanged)	51	3	2.84	.126	.903
The degree of control over dispute resolution process and outcome through the use of ADR is desirable	51	2	2.86	.119	.849
ADR allows to create ways of dealing with future disputes]	51	3	3.14	.122	.872
Communication becomes more direct or effective at the end of the ADR process and/or when new problems arise	51	3	3.14	.140	1.000

Source: Field survey 2019

To fully accomplish the second objective of this research it was deemed necessary to collect data to establish from respondents, the emphasis placed on the efficiency, effectiveness and satisfaction gained for using alternative dispute resolution (ADR) methods of resolving disputes. Also it was considered that familiarity with this practice will afford some root to gain insight into what the respondents considered as the most effective method for dissolving disputes that arise on the various construction site and industry. Respondents

were asked to respond to the exclamations listed in terms of their agreement to the efficiency, effectiveness and satisfaction obtained from using ADR from a scale of 1 to 4, where 1 signifies Never, 2 signifies Sometimes, 3 signifies Neutral and 4 signifies Always.

Table 4.2 above shows a summary of analysis conducted to evaluate the responses to identified variables or exclamations from the respondents based on their mean scores. More so, in terms of the rating from the scale of 1 to 4, the minimum rating by respondents which represents Never was 1 and the maximum rating by respondents which represents Always was 4.

The first two variables measure the efficiency of ADR used in the industry. With means scores of 2.94 and 2.75, it can be concluded that respondents within the aforementioned districts of study indeed recognized ADR to be efficient. Their standard deviations also make it clear as it depicts a dispersion close to the mean. The third variable to the ninth variable also aimed at measuring the effectiveness of ADR as per the opinion of the respondents. Similarly, the result reports five of the variables having means of 3.14, 2.90, 2.82, 2.75, and 2.75 indicating an appreciation of respondents concerning the effectiveness of ADR. That notwithstanding, two of the variable under the same bracket of effectiveness with mean scores of 2.16 and 2.00 are indifferent of the effectiveness of ADR.

The tenth variable to the fifteenth variable were also measuring the satisfaction of respondents as they used or continue to use ADR in solving their disputes. The results of all six remaining variables as per their mean scores affirm the satisfaction obtained. The highest mean starts with 3.14 and ends at 2.69.

After finding out from the respondents their opinion in respect of the efficiency, effectiveness and their satisfaction of ADR, they were also questioned as to which of the

various ADR methods they saw to be most effective. The results are summarized in Figure 4.6 below

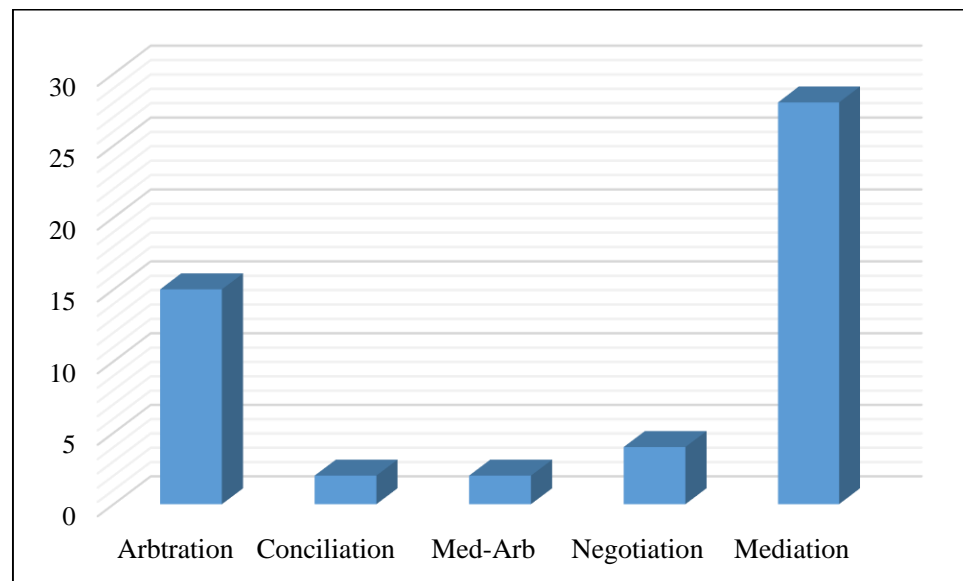


Figure 4.6 Respondent usual method of conflict resolution

Source: Field survey 2019

From the survey, mediation is evidently identified to be the most effective method for resolving disputes as per the participants having a percentage of 54.90% followed by arbitration with a percentage of 29.42%. Negotiation had the third choice of the respondents with 7.84% and Conciliation and Mediation-Arbitration (Med-Arb) also having 3.92% each.

4.5. FACTORS INFLUENCING THE CHOICE OF DISPUTE RESOLUTION

METHOD

The third and final objective of this study was to identify the factors which expedite the selection of a particular dispute resolution method. In the table (Table 4.3), 10 items purported to significant factors which come in to the disputants when looking for an avenue to handle and resolve conflicts were listed and respondents inquired to rank them by

indicating the level of importance on a Likert scale of 1 to 5 where 1 signifies Not Important; 2 signifies Less Important; 3 signifies Neutral; 4 signifies Important; and 5 signifies Very Important.

Table 4.3 Descriptive Statistics of Factors that Expedite the Selection of a Method of Dispute Resolution.

	N Statistic	Range Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Error	Std. Deviation Statistic
Open and Fairness	51	4	1	5	4.41	.171	1.219
Cost	51	4	1	5	4.31	.174	1.241
Outcome	51	4	1	5	4.22	.180	1.286
Creative Remedies	51	4	1	5	4.10	.175	1.253
Speed	51	4	1	5	3.92	.185	1.324
Privacy and Confidentiality	51	4	1	5	3.92	.192	1.369
Relationship	51	4	1	5	3.69	.187	1.334
Flexibility	51	4	1	5	3.67	.183	1.306
Enforceability	51	4	1	5	3.65	.196	1.397
Degree of Control	51	4	1	5	3.61	.177	1.266

Source: Field survey 2019

The ranking was done based the mean score of the variables listed. As per the results, the major four factors which always come into play when selecting a method to resolve construction disputes as per the respondents were the openness and fairness of the resolution process, the cost involved in partaking in a particular method, the outcomes or results and the capacity to generate remedies which suit the disputants' preference and liked by them. From the table it could be concluded judging from the mean scores that all variables are significant factors which ought to be considered when selecting a method of dispute resolution.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

Conflict is an inevitable phenomenon, which is inherent in any human organization and for that matter, present in the construction industry and even more contentious. A dysfunctional conflict comes with tension, irreconcilability and at worse deterioration of relationships and resources, however, conflict occurrences when managed and handled well also go together with its own benefits such as new acumen for working things out, harnesses group reasoning, and can be used to rejuvenate performance.

As said by John Dewey, conflict is like the gadfly of thoughts. It stimulates people to observation and memory, it brings about invention. It pushes us out of sheep-like inactiveness and sets us at noting and planning. The chapter presents a summary of the significant findings from the study, and offers recommendation to minimize conflict effects and the methods used. Conclusions are drawn from the presented findings. The chapter is structured, based on the objectives of the research.

5.2 SUMMARY OF FINDINGS

The research focused on the major sources of conflict, assessment of the various resolution methods used, and the factors which induce the selection of a dispute resolution method. The following are the comprehensive results from the findings.

5.2.1 Objective 1. Major sources of conflict

The major sources of conflicts affecting construction projects to be identified within the La Dade-Kotopon Municipal District, Shai Osudoku District and Ningo Prampram District of the Greater Accra Region was first listed as general causes of conflict comprising fifteen

(15) item variables. The outcome of the study as per the analysis showed that all the fifteen items measured were significant factors causing conflict in construction activities being undertaken in the areas of study mentioned earlier and more so, industry wide. The rate of occurrence was different for each variable considering their mean scores. One being prevalent while the others following suit.

Of the fifteen (15) items listed and assessed under the General sources of conflicts the findings revealed one (1) of the variables to be the major cause of conflicts in the mentioned developing districts being inaccurate design information. This was closely followed by eleven (11) other variables which when their mean scores are approximated could also be reckoned to be major igniters of conflict in the districts. And under the same category, three of the variables measured according to the findings however neutral when their position was compared to the eleven (11) other items came out as the least in terms of causing conflict. The two (2) variable at the bottom of the table were “different perception of work quality” following after the item “Slow progress and performance by the contractor”

5.2.2 Objective 2. Assessing conflict resolution methods employed in resolving construction conflicts

An ample evaluation systems look into the palpable and immaterial benefits, counting customer satisfaction. The aim of the second objective was to find out from the respondents how effective, efficient the processes involved in using ADR as a method of resolving dispute has been and the satisfaction they obtained with respect to the outcomes.

Dividing the whole assessment into three parts which were; efficiency, effectiveness and satisfaction of the process and outcomes, the findings according to the participants showed that they were in tandem with the fact that employing ADR methods to resolve conflict was much efficient as it saved them of much resources as well giving them quick response and

outcomes. On the basis of effectiveness, all the five out of seven variables outstandingly approved of the effectiveness of ADR. It meant that with the use of ADR, the rate at which a conflict may reoccur between the same parties was much lesser and disputants were assured of greater possibilities of settlements. They also reaffirmed that fact that further litigious actions were reduced as they succumbed to ADR as there a greater level of compliance.

The remaining six (6) variables also made it clear the satisfaction utilized when ADR is used. It was found that access to ADR was very easy and the procedural fairness appropriate. Moreover, there is always fair and appropriate treatment of participants. In addition to that is the desirable degree of control over the procedures and outcomes of the whole process as well the effective communication that with it at the end of the process.

5.2.3 Objective 3. Factors influencing the choice of dispute resolution methods

The final objective was to elicit from the respondents the factors which they saw as important and would base on that to select a particular method to settle their contractual disputes in the construction world. At the end of the analysis, the results showed that four factors were always on the minds of respondents when it came to the selection of a method to resolve construction disputes. They were the openness and fairness of the resolution process, the cost involved in partaking in a particular method, the outcomes or results and the capacity to generate remedies which suit the disputants' preference. The result however depicts an all important factor analysis considering their mean values.

5.3 CONCLUSION

The inevitability of conflict in construction organizations can be likened to that of change. At any project site where people work together as a team in the progress of executing their tasks and obligations, there will always be a possibility of conflict. Indeed, it is natural and absolutely impossible to have people from different walks of life with varied experience, training and upbringing to work together, decide on issues and work towards the achievement of project objectives and goals without conflict.

A number of literature have presented several grounds for conflict pertaining to the construction industry. And to ascertain the major sources of conflicts posing a nuisance to projects in the Greater Accra Region, 10 items purported to be possible cause of conflict were selected and employed. It was thus affirmed from the findings that inaccurate design information was the major causes of conflict to construction projects followed by inadequate communication amongst team members.

The study again recognizes the effectiveness of ADR programmes. It is made evident that alternative dispute resolution methods give room for flexible settlement options and process. It also gives room for participants to have a degree of control over how the process runs. To avoid odious waste of time and the escape of costly methods of settling dispute, the result suggests that a disputant opts for ADR as it is very accessible, cost effective and time efficient. In addition, amongst the various methods of resolving conflict, the study showed that Mediation was the most effective of them all.

5.4 RECOMMENDATIONS

Every project has its foundations on a well-designed plan and continues with communication, which is the lifeblood of all construction projects. As the usual saying goes that a journey of thousand miles begins with a single step, so does the single stroke of an architect or designer begins the most complex and multifaceted design of a project. Blunders in design can result in a lot of inherited issues of cost including unprepared maintenance where the architect fails to appreciate the buildability of that preliminary idea.

On the other hand, the architect who is in the known of the risk involved is more likely to come up with structures that will require intermittent maintenance activities. One of the many ways of assessing the architect's work is to peruse the inhabitant's need for maintenance, even if the building may be regarded as a monumental landmark of metropolitan design.

It is also critical that a technique is implemented to simplify and improve a smooth transmission of information between and amongst the project teams. To curb the menace of inadequate communication and its related difficulties, it is suggested that communication strategies like regular team meetings and discussions and project status reporting activities are introduced. These activities and strategies will serve as an avenue that will help and enable members within the team to fully appraise themselves concerning operations around the project and be fully informed.

Evaluation as applied in our daily act of decision making and choice selection considered an art and science. Decisions of evaluation planning and design process to ascertain the effectiveness of a programme related to construction definitely need to be reassessed and improved as the world of construction keeps growing and developing. Moreover, traditional analysis often precludes the many benefits derived from ADR service programmes because

these benefits are often insubstantial and not easily quantifiable. With all these pertinent issues considered, disputants ought to go all-out for a feasible balance between the need for secured results and practical limitations.

5.5 LIMITATIONS OF THE STUDY

The survey had a limitation regarding the sample size. With an expected total sample size of 60, only 51 responses were received. The results should thus be applied with caution to the whole country and other nationalities as the study was limited to a relatively small sample size compared with the national population. As a result of time constraint, the part of cross checking the questionnaires to correct ambiguities and inconsistencies through a pilot test was not done. However, the first ten responses proved that participants understood the questions. Finally, conducting the survey online naturally produced a bias towards those that use the Internet.

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APPENDICES

RESEARCH QUESTIONNAIRE

Research topic: Investigating the Factors that Facilitate Easy Conflict Resolution of Construction Projects in Ghana.

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.

A.: Respondents Profile: Please tick the appropriate box

1. Name (Optional):

2. Age of respondent.

25-35 [] 36-45 [] 46-55 [] 56 and above []

3. Nationality

Ghanaian [] Other, please specify.....

4. What is your highest level of education?

O'Level/ A'level /SHS/HND Equivalents [] 1st Degree [] 2nd degree []

Other, please specify

5. In which of the classifications below are you?

Project Manager [] Architect [] Client [] Quantity Surveyor []

Site Manager [] Engineer [] Consultants [] M&E Officer []

Other, specify.....

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

Less than 1year [] 1 – 5 years [] 6 – 10 years []

11 – 15 years []

16 years above []

B. Objective 1.: *Identifying The Major Sources of Conflict Affecting Construction Contracts in Ghana.*

Explanation of Motivation

Construction conflicts occur as a result of range of factors including defective designs, inactive measurements and evaluations among others resulting in incompatibility, disagreement or dissonance among construction projects teams.

7. In your opinion, which of the following factors play a major role in igniting construction conflicts? **Rank your response as 1 = Very Insignificant; 2 = Insignificant O; 3 = Neutral; 4 = Significant; 5 =Very Significant.**

a) General Sources/Causes of conflict	1	2	3	4	5
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					

C. Objective 2. *Assessing Conflict Resolution Methods Employed in Resolving Construction Conflicts.*

8. In estimation, how many construction disputes has your business encountered within the past 5 years?

None ☐

1-10 ☐

11-20 ☐

20+ ☐

9. Which approach was used to resolve the construction disputes?

Negotiation ☐

Court ☐

Mediation ☐

Conciliation ☐

Arbitration ☐

Other – Please specify: _____

10. Please, indicate in a matter of emphasis the efficiency, effectiveness and satisfaction gained for using alternative dispute resolution (ADR) methods for dispute resolution?

Rate as 1= Never, 2=Sometimes, 3 = Neutral, 4= Always. Please tick

Measuring the efficiency of ADR	1	2	3	4
The use of ADR is less costly than the use of traditional means of dispute resolution.				
Disputes resolved are more quick using ADR, compared to traditional means of dispute resolution.				
Measuring the effectiveness of ADR				
ADR resulted in a greater number of settlements.				
The use of ADR results in further litigation activities.				
Outcomes vary according to the type of ADR process used.				
ADR results in greater levels of compliance with settlement agreements.				
ADR results in lesser levels of dispute recurrence, i.e. recurrence of disputes among the same parties.				
ADR have an impact on the types of disputes that arise regardless of its intensity				
ADR has got negative impact, in diagnosing and correcting systemic problem/issues				

Identifying the level of satisfaction gained from using ADR				
Access to ADR, and its procedural fairness and treatment of parties by neutrals (third parties) is easy and appropriate				
Matching decisions with respect to a particular ADR process to specific cases are always appropriate.				
ADR is useful in the generation of settlement options (i.e. the quantity and reliability of information exchanged)				
There is desirable degree of control over dispute resolution process and outcome through the use of ADR				
ADR allows to devise ways of dealing with future disputes				
Communication becomes more direct or effective at the conclusion of the ADR process and/or when new problems arise				

11. In your opinion which of these methods is most effective in resolving construction conflicts?

Negotiation []	Court (Litigation) []
Mediation []	Conciliation []
Arbitration []	Mini-trial []
Med-Arb []	

D. Objective 3. *Factors Influencing the Choice of Dispute Resolution Method*

12. Please rank on a scale of 1 to 5, the perceived importance of the ten criteria in the selection of dispute resolution methods where **1= Not Important; 2= Less Important; 3= Neutral; 4= Important; 5= Very Important.**

Criteria	1	2	3	4	5
Cost					
Speed					
Open and Fairness					
Privacy and Confidentiality					
Enforceability					
Degree of Control					
Outcome					
Relationship					
Flexibility					
Creative Remedies					