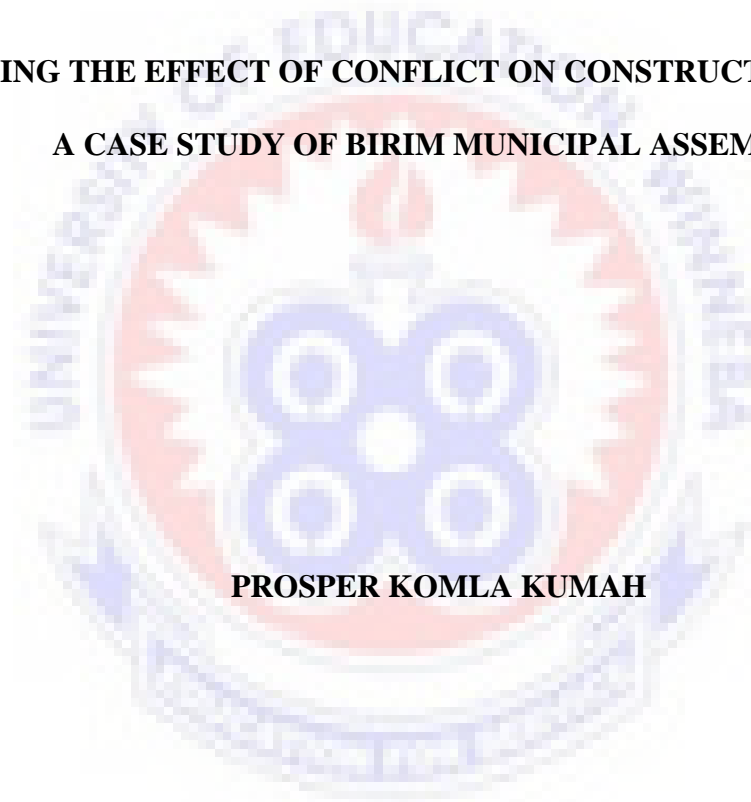


**UNIVERSITY OF EDUCATION, WINNEBA**

**EXAMINING THE EFFECT OF CONFLICT ON CONSTRUCTION PROJECTS:**

**A CASE STUDY OF BIRIM MUNICIPAL ASSEMBLY**



**PROSPER KOMLA KUMAH**

**AUGUST, 2018**

**UNIVERSITY OF EDUCATION, WINNEBA**

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**PROSPER KOMLA KUMAH**

**7161190022**

**A Dissertation in the Department of CONSTRUCTION AND WOOD  
TECHNOLOGY EDUCATION, Faculty of TECHNICAL EDUCATION, submitted  
to the School of Graduate Studies, University of Education, Winneba in partial  
fulfillment of the requirements for the award of Master of Technology  
(Construction) degree.**

**AUGUST, 2018**

## **DECLARATION**

### **STUDENT'S DECLARATION**

I, Prosper Komla Kumah, declare that, this Project, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE: .....

DATE: .....

### **SUPERVISOR'S DECLARATION**

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Project as laid down by the University of Education, Winneba.

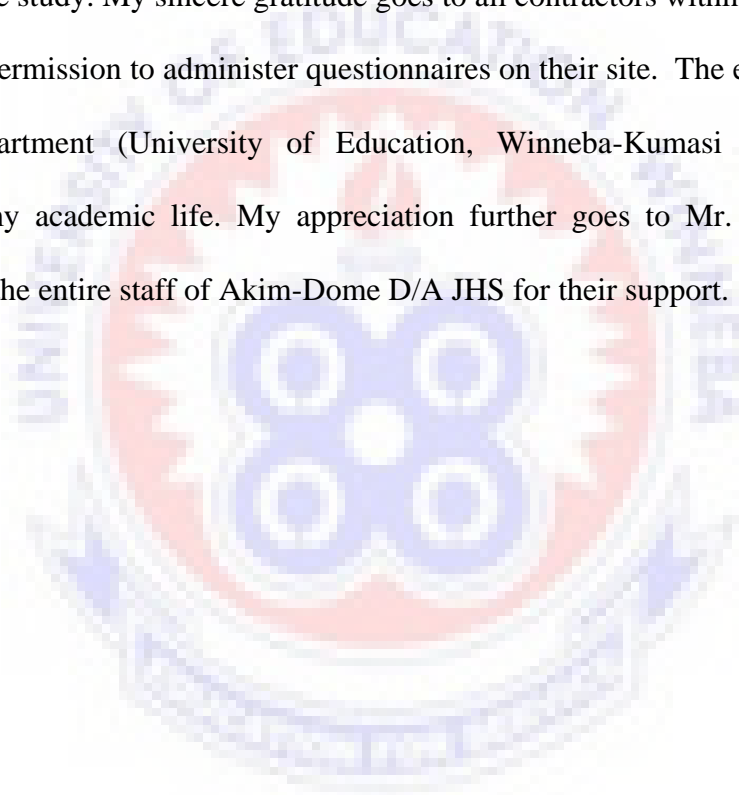
NAME OF SUPERVISOR: PROF. ING. NICHOLAS KYEI-BAFFOUR

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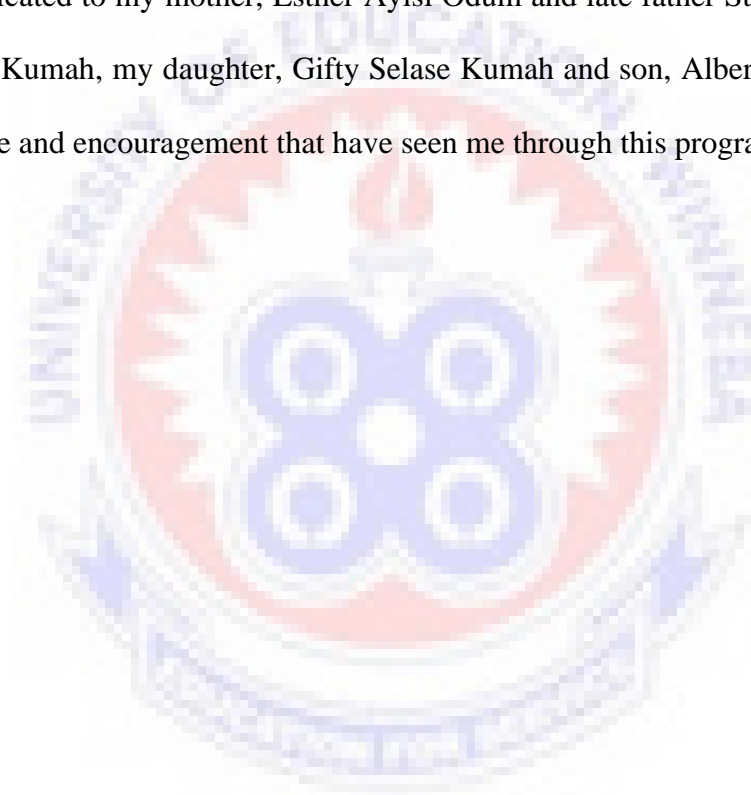
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## **DEDICATION**

This work is dedicated to my mother, Esther Ayisi Odum and late father Stephen Y. Odum, my wife Eva Opoku Kumah, my daughter, Gifty Selase Kumah and son, Albert Selorm Kumah for their prayers, love and encouragement that have seen me through this programme.



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## **ABSTRACT**

Over the years, the construction industry of Ghana has witnessed continuous conflicts on project execution. The success of every construction project depends largely on how effective conflicts are well managed. This study sought to examine the impact of conflicts on construction projects using Birim Municipal Assembly as the case study. The target

population involves contractors, employees of construction firms, clients and consultants. Purposive and convenience sampling techniques were employed in selecting sample size of 113, out of which 102 responded. Questionnaire served as the main data collection instrument adopted and results were analysed using descriptive and inferential statistics. The study found that among the causes of conflict on construction projects at Birim Municipal Assembly was the issue of inability of clients to honour payments to contractors. The existence of poor and ineffective channels of communication on projects makes information dissemination and utilisation very difficult. Key effect of conflicts on construction project was interruptions and occasionally suspension of the whole construction works. The occurrence of unresolved conflicts has led to delays attracting time and cost overruns which affect negatively profit margins of contractors and increase overall cost of projects. Negotiation and mediation were widely adopted strategies to deal with conflicts on projects. Despite the introduction of these systems, much has not been achieved in the quest to minimize conflicts on projects. It is incumbent on all parties to a project to ensure adequate and smooth flow of information, timely delivery of funds to contractors and effective conflict management tools suitable for resolving disputes as they occur based on any given circumstance.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

The construction industry in Ghana covers a complex and comprehensive field of activities involving many operative skills and conditions, which vary considerably from one project to another and as such conflict might arise at any point during the construction process. Generally, there is a low standard of contract formation and of contract administration in the construction industry, which lead frequently to unnecessary problems and conflicts (Narh, Owusu, Oduro-Apeatu & Narh, 2015). Construction projects inherently have the potential for conflicts within participants. The construction industry is subject to more conflicts, disputes, and claims more than many other industries (Enshassi & Rass, 2008). Leaders must have the ability to confront, manage, or resolve (depending upon the circumstances) conflict effectively (Grisham, 2006).

Thus it is not surprising that many construction stakeholders still overwhelmingly view conflict as negative and something to be avoided or resolved as soon as possible. However, there are many authors have pointed out conflict is a phenomenon that may give rise not only to functional but also dysfunctional effects on individuals, groups and organizations (Jaffar, Tharim & Shuib, 2011). According to Agwu (2013), conflict inevitably means that people are working against each other, in such a manner that what one wants is incompatible with that which another wants. Conflict is a necessary and useful part of organizational life. It is inevitable and an integral part of the process of change. Indeed, it is an aid to cooperation, not an obstacle. According to Patzak (2012), a conflict is essentially a clash of different expectations. This causes severe emotional involvement, which usually hampers rational negotiations. Especially in project; conflict often arise because of the uniqueness of the undertaking, the contrast to daily business, difficult

framework conditions, the pressure for change that's frequently present in projects creates many sources of friction.

Construction projects involve several actors. These actors can be classified as internal (e.g. consultant, client and contractor) or external (stakeholders who do not partake in the construction process such as users). Research has shown, risks is inherent in construction projects and are more when compared with projects in other industries (Acharya, Lee & Im, 2006). However, it must be noted that unmanaged risk results into conflicts and exacerbate the fragmented nature of the construction industry (Cheung & Mok, 2006). Construction process typically encompasses standard procedures such as planning, designing, procuring, constructing, maintaining, and demolishing, which necessitate the involvement of variety of organizations, firms, and individuals such as consultants, main contractors, and subcontractors. Inevitably, each participant possesses individual aim and objective that could be in conflict with the goal of the project. Therefore, implementation of complex construction projects is bounded by many problems due to distinctive expectation, value, and goal among project practitioners (Yousefi, Hipel & Hegazy, 2010; Yiu, Cheung & Mok, 2006).

The construction industry has a long tradition of collaborative working between the members of a construction project. To ensure that interdependencies are properly managed, the global construction industry requires that project participants across the world are able to work more closely, to exchange project information in a more structured way, and to collaborate and co-ordinate with each other to perform construction activities in order to gain maximum competence (Ren & Anumba, 2004). There is a need to develop a

negotiation methodology for the project schedule optimization process that ensures overall optimality and resolves conflicts by negotiation among project participants. The challenges are to find a new approach that enables project participants to identify schedule conflicts, consider alternatives, and resolve conflicts in a highly coupled network of related activities (Kim, 2001).

### **1.2 Statement of the Problem**

It is essential for a successful project to be completed in scheduled time and within estimated cost and of specified quality. For this purpose, project should be well planned, properly designed and above all agreeable construction. Among several factors which influence success of a construction project, one of them is art of dealing with conflicts. It is most common problem in working team of a project. It gives rise to the problems including increasing project cost, project delays, reduce productivity, loss of profit and damage in business relationships. Conflict rooted in construction, continued conflict management, which should focus on the strategy to avoid or minimize conflict as soon as possible. This is due to the fact that, despite the different methods of conflict management and conflict resolution techniques that have been identified and continued to be explored, the industry is experiencing tremendous growth in conflicts. The desire to conduct this study stems from the researcher's personal observations over the years on misunderstandings on construction projects among parties to the work at the Birim Central Municipality.

### **1.3 Aim of the Study**

The aim of the study, therefore, is to identify issues on which conflicts occur in construction projects, factors causing conflicts and how conflicts are managed.

#### **1.4 Objectives of the Study**

The specific research objectives are:

1. To identify causes of conflicts among stakeholders on construction projects in Birim Municipal Assembly
2. To examine the effects of conflict on construction projects in Birim Municipal Assembly
3. To identify conflict management resolution strategies adopted on construction projects in Birim Municipal Assembly

#### **1.5 Research Questions**

1. What are the causes of conflicts among stakeholders on construction projects in Birim Municipal Assembly?
2. What are the effects of conflicts on construction projects in Birim Municipal Assembly?
3. What are the conflict management resolution strategies adopted on construction projects in Birim Municipal Assembly?

#### **1.6 Scope of the Study**

The study was centralised at Birim Municipal Assembly in the Eastern Region of Ghana. It focuses on projects undertaken at various construction site at the municipality. Issues



dealt in the study include causes of conflicts, effects of conflicts on productivity and resolution strategies that can curb conflicts on projects.

### **1.7 Significance of the Study**

This study is expected to serve as a guide to interested stakeholders in dealing effectively with conflicts on construction projects. It adds knowledge to existing literature on conflicts within the construction industry. Findings of this study will help policy makers in developing comprehensive and sound decision making in respect of conflicts on construction projects. The recommendations emanating from the study will assist interested stakeholders on best practices to manage conflicts on construction projects.

### **1.8 Limitations of the Study**

The research was confronted with several challenges. Some workers on site were reluctant to divulge information to the researcher for fear of victimization even though the academic purpose of the study was communicated to them. Since the study was focused only Birim, generalizing its findings to cover the entire Eastern Region and beyond would be difficult.

### **1.9 Organisation of Chapters**

The study was structured into five chapters. Chapter One presents introduction which include background of the study, statement of the problem, aim of the study, objectives of the study, research questions, scope of the study, significance of the study, limitations of the study and organisation of the study. Chapter Two deals with literature review based on concepts, theories and empirical studies. Chapter Three consists of methodology adopted to conduct the research with its sub divisions like research design, population, sample size,

sampling technique, data collection tools and data analysis. Chapter Four handles analysis of data collected and its discussions. Chapter Five comprises of summary of findings, conclusions and recommended ideas to help solve conflicts on site.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Chapter two of this study deals with the presentation of literature review related to crucial issues which pertain in the survey. It involves concepts, theories, empirical studies, models of already published works by several authors on conflicts within the construction industry. This is done to amplify understanding of issues under study.

## **2.2 Definition of Conflict**

According to Thomas (1992), there are three themes among the definitions of conflict. The first, is that whether conflict exists or not is a perception issue. The perceived difference may not be real but conversely if the difference is real but not perceived there is no conflict. The second common theme is that there is interdependence among parties (i.e. each has the potential to interfere with the other). Third, there are issues of blockage, opposition and scarcity. Jaffar et al. (2011) and Champoux (2010) gave similar definition of conflict as a doubt or questioning, opposition, incompatible behavior, controversy or antagonistic interaction. Construction projects nowadays have become more complex and conflict seems to be synonymous with construction projects. Ekhaton (2016) defined conflict as struggle between at least two independent parties who perceive incompatible goals, source resources and interference from other achieving those goals. It must be noted that conflict is entirely unavoidable in the building construction industry, the degree and scale however, vary from project to the other.

Conflict is as indispensable as peace since the only reason for seeking peace is because there is a conflict, which is inevitable in the construction industry as in other area of human endeavour as (Lee, 2011) concluded. According to Verma (1998), conflict is defined as a serious disagreement between two people or a number of people, which usually end up in

a positive result if properly managed and conversely negative if not properly managed to the satisfaction of stakeholders. However, the fact that individuals involved are from different background, orientation and values are to work on those complex issues on the project to have the expected outcome that satisfy all stakeholders is adequate to resolve conflict within the limits of the project.

### **2.3 Concept of Conflicts in the Construction Industry**

Mitkus and Mitkus (2014) emphasised that construction conflicts affect the interests of many stakeholders in connection with big investments; they reduce profits and are therefore very expensive and unprofitable. However, the stakeholders become increasingly dissatisfied with the legal methods of construction conflict resolution. As a result, the existing confrontational culture often determines a reduction in labour efficiency and an increase in production costs (Ng et al., 2002). Moreover, Yiu and Cheung (2006) stated that, in the construction industry, conflicts sometimes seem inevitable due to high differences in interests among the participants of construction projects. Grisham (2006) described conflict as an integral part of human interaction between people, groups, cultures, firms, and countries. If guided, conflict can be healthy and productive. However, if ignored, conflict may lead to disastrous consequences, including the deterioration of long-term relationships.

A research conducted by Kassab et al. (2010) showed that conflicts remain a challenge in the construction industry with the potential leading to project failures. Dada (2013) referred to other works to conclude that the harshness, pressures and toughness of the construction industry amount to conflicts. Misconduct by professionals in the construction industry has

not affected only the public confidence and respect for the pride of professional competencies. Professional bodies are aware that there had been unwarranted concern on the state of professionalism in the construction industry in governments special discourses (Olatunji, 2007). With respect to the construction industry, Ng et al. (2007) asserted that project conflicts can be described as a spiral between various parties in a design and construction project. One school of thought is conflicts are not good for projects and another school of thought is conflicts are needed for better relationships and better performance in the projects (Englund & Bucero, 2012). According to Lam et al. (2007) conflict is a disagreement between different parties over opinions, views and ideas.

Conflict is indispensable as peace since the only reason for seeking peace is because there is a conflict, which is inevitable in the construction industry as in other area of human endeavour (Ogungayo, 2013). According to Khekale and Funtane (2013), given the uncertainties involved in a construction project and the magnitude of funds involved, it is only natural to have disagreement between parties, but these need to be resolved in an amicable manner, without having to resort to a more formal mechanism, the parties at times agree to disagree and seek redressal through independent intervention. Chong (2011) looked at conflict as the internal discord that exists between project team, which usually arise from misaligned ambitions, communication breakdown or not having the right players in key positions as the most prevalent causes of conflict in the construction industry. He further explained that the complexity in the construction industry from the design to construction and handing over of the project involve a lot of specialized knowledge that the project managers must use effectively if he is tactical enough to resolve conflicting issues on a project. Ogunlana and Mahato (2011) looked at conflict in the construction

industry as a dynamic situation that is intricate and the sector has a rate of change that are not constant but continuous between different parties that must be managed by the project manager to achieve positive results.

#### **2.4 Causes of Conflict in the Construction industry**

Acharya and Lee (2006) have investigated the key factors of conflicts in the Korean construction industry. These critical causes of conflicts are described by Acharya and Lee (2006) as follows:

- Differing site condition
- Local people obstruction
- Difference in change order evaluation
- Errors and omission in design
- Excessive quantity of works
- Double meaning in specification

It is a common case in construction that the contractor is regularly looking for cheaper building materials and trying to obtain client and designers consent to replace the materials in the construction design in order to reduce the cost price of construction works. This circumstance was identified by Acharya and Lee (2006) as the cause of conflicts in construction projects.

The causes of conflict among the project team members as posited by Olalekan (2013) are difference in belief, orientation, demands, prospects, views, imagination and ego, which is not far from what most researchers have mentioned in respect of other areas of life. Chong (2011) emphasized the main cause of conflict between organizations is mistrust, and it is

common because of divergent cultures and unrealistic expectation as the second potential cause of conflict. Gyulay (2012) and Yates (2003) both agreed that type of procurement method adopted usually lead to conflict in the construction industry, which include cost, delivery time and quality, sharing the activities and responsibilities and risks among stakeholder.

Narh et al. (2015) survey conducted showed that among the various causes of conflicts in the construction industry of Ghana are the following:

- ✚ Failure of clients to honour payments
- ✚ Delays in time for project completion
- ✚ Type of procurement method adopted
- ✚ Breakdown in communication
- ✚ Conflicting commitment of project managers
- ✚ Absence of qualified personnel in key positions
- ✚ Unclear and incomplete description of items in the Bills of Quantities
- ✚ Differences in views among stakeholders
- ✚ Errors, defects or omissions in contract documents
- ✚ Inaction on the part of contractors
- ✚ Deficiencies in designs
- ✚ Uncomplimentary behavior of clients
- ✚ Unrealistic expectations from clients
- ✚ Behavior of sub-contractors
- ✚ Unforeseen site problems
- ✚ Dissatisfaction of work progress of main contractor by Architect/Engineer

- ✚ Limited Resources
- ✚ Contract awards to incapable contractors
- ✚ Lack of team spirit among project team members

It can be said that the construction industry is one that comprises a diversity of interests, professions and procedures which interact to create a completed project and that conflict is unavoidable on projects (Narh et al., 2015). Al-Sibai and Alashwal (2014) identified other causes of conflict including deficient management, clarity and completeness, poor communications, failure to appoint a project manager, discrepancies or ambiguities in contract documents, inadequate tracing mechanisms for request of information, failure to respond in timely manner, supervision and coordination efforts on the part of the project, lowest price mentality in engagement of contractors and designers, the absence of team spirit among the participants, and lack of constructability.

Research by Lei et al. (2011) show that defective in contract, payment dispute, communication problems, the absence of team spirit among the participants, deficient management, supervision and co-ordination efforts on the part of project participants, unrealistically low bid by contractors are the sources that caused conflict in construction industry. According to Dada (2013), the major causes of disputes in construction project are clients' failure to settle claims brought on by the contractor, use of defective drafted contracts, extension of time claims, variations, delay in complete, poor workmanship, poor communication, use of incomplete designs during tender, under pricing of the tender, mismanagement of funds by contractors, poor planning and budget estimating, poor record keeping and final accounts disagreements. From these previous study, the causes of conflict



can be summarize and categorize in four types of groups in this research, such as Contractual problems, Behavioural problems, Technical problems and Management problems.

According to Lei et al. (2011), the possible reasons for conflict in the construction industry are the following: (i) during the lifecycle of construction, especially in the planning phase, the participants are confronted with enormous issues and a multitude of implicit and explicit interests; (ii) there are obvious differences in mental behavior, culture, temperament, etc., among different negotiators. Thus, their abilities, knowledge and preferences for the same issue differ too; (iii) a huge amount of information is required for decision-making in the construction industry. Therefore, it is difficult for decision-makers to grasp all the information required, the information used by every participant is unilateral and deficient.

According to Patzak (2012), one of a typical cause of conflict is unclear project objectives. Unclear objectives often implies that the team members work on a solution (goal) which they consider to be right, provided they have sufficient experience with projects of that kind. In most cases, there are different experiences and also differing opinions. Since interpersonal relationships depend so much on good communication between people, disputes will often evolve out of miscommunication, or the absence of proper communication. Page (2008) indicated that perception and reality become confused and team members become suspicious of one another resulting in a breakdown in trust leading to conflict. Synder (2010) postulates that, depending on the length, complexity and organizational structure, the project manager may be expected to conduct project

performance appraisals on team members, which will generally include areas for improvement, goals for development and feedback on performance.

## **2.5 Sources of Conflict**

Kumaraswamy and Yogeswaran (1997) indicated in their study that the sources of construction disputes are mainly related to contractual matters, including variation, extension of time, payment, quality of technical specifications, availability of information, administration and management, unrealistic client expectation and determination. Common sources of conflict include the competition for scarce resources, violations of group or organizational norms, disagreements over goals or the means to achieve those goals, personal fights and threats to job security, long held biases and prejudices among others (Pinto, 2007).

Jia et al. (2011) identified seven major sources that create conflicts, namely: project priorities, administrative procedures, technical opinions and performance, trade-off manpower resources, cost, schedules, and personality. There are also other sources of conflicts which are classified in different ways for the different working environments such as: cultural differences, religious differences, military conflicts, economic conflict, and traffic conflict (Jia et al., 2011).

## **2.6 Categories of Conflicts in the Construction Industry**

Awakul and Ogunlana (2002) classified conflicts in projects based on origin. Their study classified conflicts into internal and interface conflicts. Similarly, Dada (2012) categorized conflicts into internal and external conflicts. Both studies viewed internal conflicts as

conflicts that occur within parties to the contract, such as clients, contractors, and consultants. Internal conflicts are involved participants inside of the project; whereas interface conflicts are involved the parties outside the project. Thus, internal conflict can be said as the conflict among the internal stakeholders of the project. Certain common internal conflicts that occur among the internal stakeholders can be seen through the construction projects. For example, conflict caused by poor communication amongst project team members, low price mentality in engagement of contractors and designers (San, 2013).

Internal conflict belongs to disputes, which can make the difficulties in communication, break relationships, and reduce productivity among the internal stakeholders of the project (Jaffar et al., 2011). In order to resolve these problems, it is needed to identify the critical factors that had led to internal conflict among the project stakeholders, and determine the possible affects that will impact on the performance of construction project. In contrast, interface (external) conflict refers to conflict between project participants and external stakeholders (users, people affected by project etc.).

However, Mahalingam and Levitt (2007) classifies conflicts into different phases of construction projects namely: planning, design and construction phase. Similarly, Acharya et al. (2006) presents a more detailed classification of conflicts in construction. Conflicts were classified into client, consultant, contractor, third party and other project related conflict. However, it must be emphasized here that the classifications presented by Acharya, et al. (2006) and Mahalingam and Levitt (2007) tends to present a more robust

classification, however, these classes tend to overlap each other. Thus, classification of conflicts to internal and external, is simpler and will reduce the likelihood of any overlap.

## **2.7 Conflict and Project Management**

According to Rauzana (2016), project management can be defined as planning, organizing, directing, controlling of project resources, to achieve short-term goals that have been determined. Project management using an approach and hierarchical system of vertical and horizontal. Objective of the project management is composed of elements of cost, quality, and time. The third objective of project is triple constraints are as follows:

1. The cost of the project must be completed at a cost that does not exceed the budget.
2. Quality, product or output of the project must meet the required specifications and criteria.
3. The time, the project must be done in accordance with the period and the end date specified.

Rauzana (2016) noted that in the implementation of a project there are elements of implementation and each has the duty and authority in accordance with his position. Organizational structures in a project need to know to explain the relationship of duty, responsibilities and authority of individuals and groups. In the implementation of the project, there are several elements in project, namely owner, consultants and contractors. Working relations elements of project are as follows:

1. The working relationship between the owner and the consultant is a contractual relationship that poured in the agreement Working.

2. The working relationship between the owner and the contractor is a contractual relationship that poured in the agreement Working.
3. The working relationship between the consultant and contractor is functional relationships in performing their duties and responsibilities of each as been stated in the implementation of the document.

The procurement strategy and the selection of contractors and consultants is an area that requires attention. The identification, allocation and proactive management of risk are central to dispute mitigation. Standard forms of contract should be used, as both parties are generally familiar with the obligations assumed by each party. The use of competitive tendering often results in the lowest 'price' being accepted by a client. Lowest price does not necessarily result in best value for money (Ekhaton, 2016). Often the contractor with the lowest bid will have the smallest margin. If this margin is depleted then there is a possibility they may adopt opportunistic practices to recover any losses that may have been made. The use of negotiated or selective tendering with a policy whereby contractors openly present their margins and how they priced the project could potentially breakdown any 'them and us' barrier that is perceived to prevail. In addition, the sharing of knowledge through the establishment of interorganizational communities of practice would encourage joint problem solving and possibly reduce the incidence of conflict between parties (Love et al., 2003; Ekhaton, 2016).

According to Ekhaton (2016), the fact that project management is synonymous with change management creates stress for both the project manager as well as the project team. The current tendency for organizations to set tighter budget and schedule goals exacerbates the

stress levels of both the team members and project managers. In addition, teams within an organization often compete with each other for resources and other priorities. As a result, it is not unusual for conflict to arise among project team members as well as between team members and other members of the organization (Klastorin, 2004).

Lee (2011) and Khanaki and Hassanzadeh (2010) claimed that conflict is unavoidable in all human endeavours especially in project management, where all project team members have to work together to start and complete the project to the expected quality standard within cost, the predetermined duration and to the satisfaction of all stake holders. It is understandably impossible for all stakeholders from different background; diverse ideologies and skills to work together without any conflict, so the project manager having all the authority and power must make sure that all conflicts that arose are properly managed to the benefit of the project. They also explained the evolution of three noticeably different views on conflicts in projects and organizations, which are the traditional views, human relation views and interactionism perspectives.

## **2.8 Conflict Management**

Conflict management may be defined as a process that involves designing effective strategies to minimize the dysfunctions of conflict and enhancing the constructive functions of conflict in order to enhance learning and effectiveness of an organization (Rahim, 2001). Conflict management styles can be defined as styles of behavior with which interpersonal conflict may be handled (Rahim, 2002). Conflict management involves first detecting the conflict and then solving it. One best practice is to look at the conflict as a process (Robbins, 2003) not to concentrate on conflicting. Sutterfield et al. (2007) has described a

conflict process with stages such as incompatibility or potential opposition, personalization and cognition, intentions, behaviour and outcomes. They also gave a project conflict management framework with steps such as identification of conflicts, classification of conflicts such as interpersonal, task, or process based, setting conflict strategy selection criteria, identification of alternative conflict handling intention strategies, selection and implementation of conflict handling intention strategies.

Conflict management can be formal or informal. Best results come when you combine both. One important thing is conflict management in projects or organizations should be ethical (Aula & Siira, 2010). It is best practice to have conflict management systems (CMS) in projects with characteristics such as input, transformation, output, purpose, boundaries and feedback (Aula & Siira, 2010). Conflict management systems should have right based, interest based and negotiation based processes. Constructive conflict management leads to more innovation and better performance. Organizations have to make the conflict management as core competency. Akiner (2014) emphasized that conflict management is becoming ever more important due to the rapid changes that are common in the current construction business environment. Global change, cultural diversity within multi-national project teams, and complexity are a few of the reasons that managing conflict is a critical skill for project team leaders. Due to the nature of the construction industry, the successful changing of a culture or working with another national culture requires clear management and commitment at all levels of organizations within the construction industry (Akiner & Tijhuis, 2008).

Ma et al. (2008) have done a meta study of five hundred fifty-six journal articles on conflict management which were published between 1997 and 2006 and expressed that conflict management research is concentrating mainly few areas such as role of cultural differences in conflicts, conflict management styles, conflicts at workplace, conflicts and team performance and conflict management practices. According to them, the intellectual structure of conflict management is taking back stage in conflict management research and it was not highlighted much in previous conflict management literature. Ock and Han (2003), states that the conflict management in addressing the problem of conflict with several methods, as follows:

1. Force

Impose one's views at the expense of the strength of another.

2. Smoothing

Minimize the differences and emphasize togetherness to issues of conflict.

3. Withdrawing

Withdrawing from the real contradictions and conflict situations.

4. Compromise

Consider the various issues, bargaining, and look for ways of settlement or that bring satisfaction to the parties involved in the conflict.

5. Problem solving

Part of any project manager's role as a leader is to recognize conflict, understand the sources of conflict and manage it, and to do this a project manager must be able to understand the basics of negotiation theory and have sufficient competencies to lead in such situations. Negotiation plays an important role in resolving claims, preventing



disputes, and keeping a harmonious relationship among project participants. The construction sector represents one of the most dynamic and complex industrial environments where conflicts among builders and owners are very common particularly in a bidding or claiming situation where owners, builders and contractors pursue their own interests at the expense of the others, leading to conflict or cooperation (Cristobal, 2015; Lei et al., 2011).

The time required to complete the project is usually greater than the time specified in the contract and, because of the overriding importance of time for both the owner and the contractor, delays are the source of frequent disputes and claims among owners, clients and consultants, leading to lawsuits. There is a general consent between theorists that Game theory provides, by its very nature, the appropriate tools for the analysis and eventual solution of conflicts of any kind. The course of a conflict as well as its resolution depends on the decisions made by the various actors involved. Each party, when considering its decisions, should take into account the decisions made by all the other parties. Game theory is a natural tool that can be used in such interactive situations where the results of the interaction depend on all the players' decisions (Cristobal, 2015; Lei et al., 2011).

## **2.9 Theoretical Framework**

According to Fellows and Liu (2008), there are three main perspectives on conflict: functionalist, behaviorist, and interactionist. The traditional functionalist perspective regards conflict negatively as disruptive. Behaviorists are neutral, regarding conflict between individuals and groups as inevitable and differences in the consequences of conflict arising through differences between people's perceptions, personalities, interests,

expertise, and goals. Interactionists view conflict as carrying out useful functions to ensure social dynamism and to enhance decisions (Fellows & Liu, 2008). In sociological perspectives, theoretical research on conflict is based implicitly or explicitly on two approaches, the “functionalist perspective” and the “conflict theory”. The functionalist school likened society to an organism with inter-related parts, kept together by consensus and cooperation. Harmony and cooperation are seen as the natural state of human affairs and so conflict, which destroys consensus, is negative and destructive and thus, must be avoided (Farley, 2000).

On the other hand, conflict theory which arose primarily from the work of Marx have the underlying assumption that conflict reflects conflict in society as a whole, as society is made up of groups with competing interests. This occurs because wealth and power are distributed unequally, so different social groups have different and conflicting interests, that is, between the interest of those who own an enterprise and those who simply work in it. One major historical form of organizational control structure is lodged in *occupational status group*, with two sub-types; the *crafts guild* and the *professional group*. The power of the craft guild is based on the monopoly over practical expertise and has control over a still largely secret knowledge based. The autonomous professionals of collegially and peercontrolled status group provide services to clients based on control over theoretically and scientifically increasingly rationalized knowledge based (Heydebrand, 1977).

Both groups gain additional power from the use and sale of services produced under conditions of task variability and complexity which may lead to conflicts as witnessed in the construction industry. Current views on conflict correspond to what McKenna (1994)

calls the interactionist perspective. Conflict is seen as neither good nor bad, just inevitable. It recognizes that too much conflict will hamper an organisation's welfare and absorb a great deal of energy that could be devoted to doing other things. However, it also accepts that where no conflict exists, ideas are never challenged, and these stall any impetus to change things for the better. All the concepts on conflict give confirmation that conflict is inevitable in all social structures, including organizations. Therefore conflicts in an organization can be better examined taking into consideration the historical processes that gave rise to them. The identification of theoretical approaches to conflict, conflict in organizations, the dynamics of conflict and a conceptual model based on conflict and its conflict management theories will lead to efficiency in delivery and taking proactive measures in reducing and resolving conflicts.

Expectancy Theory 'says that if you can create an expectancy in a person, the expectancy may indeed become fact' (Newell, 2008). If a person is told that he or she is a poor performer and is no good at doing a job, the person will eventually become no good at doing the job and become a bad performer and consequently if a person is told is a high performer and does good work, the person may indeed become a good worker and a high performer. In practice, in project management, this concept can be applied by treating people with encouragement, giving them a sense of recognition and achievement, and giving them a sense of recognition and achievement, and giving praise publically and criticism privately. This can come in handy by the project leaders to exercise their management skills in resolving conflict issues thereby improving team productivity (Musonye, 2010).

According to Verma (1998), Smith (2002) and Lee (2011), there is a belief in the traditional view that conflict is destructive, and its impact is always negative as it usually leads to gradual loss of performance, and as such, it is good to avoid conflict. Consequently, conflict avoided always end up in violence, destruction and irrationality. In the traditional view the manager in the process of reducing, suppressing or eliminating conflict unconsciously start to become authoritarian, which hide the causes of the conflict and the positive features of conflict. Verma (1998) looked at the human relation perspective, which emerged in the late 1940's and move gently back and forth through 1970's as it was accepted that conflict is unavoidable as it is a natural phenomenon in any project or organization. The response to conflict determines whether the result will be positive or negative. (Khanaki & Hassanzadeh, 2010) Claimed that conflict is now understood to being a creative force and the only thing needed is to take that advantage of the need to innovate more. latest view is the interactionism perspective, which concludes that if conflicts are managed properly, it increase performance as such conflict was accepted as a necessity. Interactionism perception enables the Project manager to appropriate conflict to keep the project self-critical, viable, creative and innovative.

## **2.10 Models of Conflict Management**

Initial models of conflict management were developed in 1970s by organizational and social psychologists (Sudhakar, 2015). Thomas and Kilmann (1974) have developed a two dimensional model consists of conflict resolution techniques such as compromising, accommodating, avoiding, collaborating and competing. Robbins (2003) has given a conflict-survival model with constructs such as conflict, change, adaptation and survival. Organizational effectiveness is high at optimum level of functional conflicts (Robbins,

2003). With respect to communication, there are three types of conflict management models. They are integrative and distributive negotiation models concentrating on labour negotiations, mediation competency model concentrating on third party interventions and dual concern model concentrating on individual and informal conflict management in organizations (Aula & Siira, 2010).

Traditionally conflict management models are of two types. They are *structural models* and *process models* (Appelbaum et al., 1999). *Structural models* deal with factors impacting conflicts in projects and conflicting process. *whereas process models* deal with the sequence of events involved in the conflict. Process models are more of dynamic in nature and structural models are more of static in nature. Darling and Walker (2001) have presented a *behavioral style model* for conflict management comprising behavioral styles such as director, socializer, relater and analyser.

Ephron in Pondy (1967) asserts that, only a very abstract model is likely to be applicable to the study of all organisational conflict phenomena. To be useful in the analysis of real situations, a general theoretical framework must at least fit several broad classes of conflict, which may occur within the same organisation. This suggests that, different ways of abstracting or conceptualizing a given organisation are required, depending on what phenomena are to be studied. Three models, which are; bargaining, bureaucratic and systems models regarded as basis for general theory of conflicts used as a framework for analysis of several broad classes of conflicts in organizations. A reasonable measure of potential conflict among members in a group is the discrepancy between aggregated demands of the competing members and the available resources. In situations where the

resources in a group are limited, each competing party strives to acquire the scarce resources on expense of the other party losing, hence resulting into conflict.

Such conflict is described by Walton and McKersie in Pondy (1967) as complex relationships which involve both integrative (cooperative) and distributive (competitive) sub-processes. The integrative sub-process is largely concerned with joint problem solving among the competing parties, and the distributive sub-process is concerned with strategic bargaining. A key element in strategic bargaining is that of attitudinal structuring, whereby each party attempts to secure the moral backing of relevant third parties, like the public or government.

The bureaucratic approach attempts to minimize conflict by altering the act of supervision, the leadership approach has sought to alter the style of supervision (Pondy, 1967). Leadership theorists have proposed minimizing conflict by using personal persuasion and group pressures to bring subordinates goals more closely into line with the legitimate goals of the organisation. They have actually prescribed solutions, which decrease autonomy and increase dependence. By heightening the individual's involvement in the organisation's activities, they have actually provided the basis for the intense personal conflict that characterizes intimate relations.

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conflict. Such conflict is described by Walton and McKersie in Pondy (1967) as complex relationships which involve both integrative (cooperative) and distributive (competitive) sub-processes. The integrative sub- process is largely concerned with joint problem solving among the competing parties, and the distributive sub-process is concerned with strategic bargaining. A key element in strategic bargaining is that of attitudinal structuring, whereby each party attempts to secure the moral backing of relevant third parties, like the public or government.

## **2.11 Types of Conflicts in the construction Industry**

### ***Intrapersonal conflict***

The conflict experienced between individuals in the same group or unit for example coworkers, room-mates, unit members and etc. Such conflicts exists whenever people interact or come together to accomplish a common goal or objective (Raver & Barling, 2008). Identifying interpersonal conflicts early, and understanding how unresolved conflict places a burden on the financial health of a contracting company are the keys to cultivating an efficient and amicable workplace (Brockman, 2012; Narh et al., 2015). Co-workers may disagree over problem-solving tactics or shared resources, or employee may enter conflict with customers and clients, managers and supervised employees can also fall into routine disagreements over managerial style or workplace expectation (Femi, 2014). In addition, interpersonal conflict has been identified as a determinant of work disability, occupational accidents, and other costs related to reduced quality, loss of skilled employees,

restructuring inefficiencies, decreased motivation and productivity, absenteeism, and employee turnover (Brockman, 2012).

### ***Intra-group conflict***

The conflict between groups in the same organisation, team or command. The interpersonal and intra- group conflicts can further be categorized into three types: the relationship, task and process conflicts (Femi, 2014). There are two main types of intra-group conflict: task conflict and relationship or emotional conflict (Femi, 2014).

An important characteristic of interest group conflict is that negotiation is done by representatives who face the dual problems of securing consensus for the negotiated solution among respective group members, and compromising between the demands for flexibility by his opposite member and the demands for rigidity by his own group. At conflict resolution stage the attempt is normally made to either increase the pool of available resources or to decrease the demands of the parties to the conflict (Nyarko, 2014).

### ***Relationship or emotional conflict***

This is a perception of interpersonal incompatibility and typically includes tension, annoyance, and animosity among group members. Relationship conflict negatively affects group decision quality in three ways. First, it limits information processing ability of the group because the group members spend most of their time and energy focusing on each other rather than on the group problems. Second, it limits group members cognitive functioning by increasing their stress and anxiety levels and third, it encourages antagonistic or sinister attributions for other group member behaviour, which can create a self-fulfilling prophecy of mutual hostility and conflict escalation (Narh et al., 2015).



Several researchers have empirically tested various teams and performance criteria to distinguish and define what the outcomes of relationship conflict are, and how these outcomes contribute to performance loss on a team (De Wit et al., 2013; Simons & Peterson, 2000, Yang & Mossholder, 2004). As each of these performance measures demonstrated a performance loss for the team resulting from relationship conflict, it is beneficial to discuss what outcomes of relationship conflict are key contributing factors to performance loss. Each of the outcomes of relationship conflict that will be discussed has a unique ability to effect team performance through its distinct inhibiting factors. The three primary outcomes of relationship conflict that effect performance loss are decision quality, lack of consensus, and lowered commitment to the group (De Wit et al., 2013; Lau & Cobb, 2010). Decision quality is seen as essential for team success and is dependent on cognitive functioning which can be effected by relationship conflict. Consensus in a workgroup is necessary in the formulation of new ideas and decision making quality and commitment to the group is a key ingredient for members' buy-in and participation in the group (Lau & Cobb, 2010).

Relationship conflict's effect on member satisfaction and commitment to the group is a practical consequence resulting from the relational walls that relationship conflict creates. The interpersonal aspect of relationship conflict has the consequence of eliciting a negative response between team members and creating a barrier of dissatisfaction with the workgroup environment and therefore putting team performance and likelihood of working together again at risk (De Dreu & Weingart, 2003).

### ***Task or cognitive conflict***

This is a perception of disagreements among group members about the content of their decisions and involves differences in viewpoints, ideas, and opinions. Simmons and Peterson (2000) indicated that task conflict can improve decision making outcomes and group productivity by increasing decision quality through incorporating devils advocacy role and constructive criticism. Groups use members capabilities and prior knowledge better when the conflict is task-focused, rather than when conflict is absent or relationship-focused. Groups with an absence of task conflict may miss new ways to enhance their performance, while very high levels of task conflict may interfere with task completion (Narh et al., 2015).

According to Simons and Peterson (2000), a number of researchers have found that task conflict can lead to increased satisfaction with the group decision and a desire of members to stay in the group, and also have shown a cross relationship between the two forms of conflict. Researchers have established that efforts to stimulate potentially beneficial task conflicts run a substantial risk of triggering detrimental relationship conflict (Narh et al., 2015). Simmon and Peterson suggest two possible explanations; first they contend that, task conflict leads to relationship conflict through a process of misattribution. Group members constantly interpret the behaviour of other group members they infer intentions, appraise whether the source of the behavior they see is internal or external, and assess the completeness and accuracy of the arguments made by others. When this attribution process points toward personal attachment or hidden agenda, then task conflict triggers relationship conflict.

Cognitive conflicts resulting from different evaluation of empirical data or facts, given that parties interpret, combine or deduce different conclusions from the same basic elements. In most cases, it may be realized that data available is insufficient or facts not clear enough to properly assess a situation. This can be resolved by the technical team through additional studies to clarify facts or to obtain additional and more reliable data. And this may contribute for changing the conflict situation into a structured problem (Moura & Teixeira, 2004).

### ***Process Conflict***

Carmen *et al* (2013) define process conflict as an awareness of controversies about aspects of how task accomplishment will proceed. It pertains to issues of duty and resource allocation such as; who should do what or how much one should get. This may happen when for instance group members disagree about whose responsibility is to carry out and complete a specific duty. Jackson *et al* in their study of process conflict identified three sub- categories of process conflict which are; scheduling and timing; Contribution and workload and Work method and approach to issues.

### ***Normative conflicts***

Normative conflicts resulting from divergences about values, behaviours and norms that should prevail in socially adequate conducts. Root causes for these conflicts are ethical and moral principles that are not negotiable. The best approach to this situation is by reformulating the conflicting issue in order to transform it in a conflict of interests (Moura & Teixeira, 2004).

### ***Horizontal Conflicts***

There are two essential types of conflict in organizations: vertical and horizontal. Types of conflict situations experienced by managers include vertical conflict, horizontal conflict, line-staff conflict and role conflict. Dada (2012) observed that organizational conflict involves interpersonal conflicts with colleagues or supervisors, or intergroup conflicts within different sections of an organization. Horizontal conflict occurs between individuals of the same level, such as managers in the same organization. Meredith and Mantel (2006) illustrate that horizontal conflict occurs between employees within the same unit, on same hierarchical level. It can manifest itself for many reasons, including ideas, decisions about which units or individuals do not agree or the distribution of resources. One such consequence is that the PM tries to pass a stringent cost and time estimate along to functional managers whose units are expected to perform certain work on the project. Conflict then arises when the functional managers complain that they cannot meet the time and cost restrictions. This tends to build failure into the job of managing a project, another source of conflict between PM and senior management (Meredith & Mantel, 2006).

### ***Vertical Conflicts***

Vertical conflict occurs in group of different hierarchical levels such as supervisors and salesmen in the same organization. According to Meredith and Mantel (2006), when vertical conflict takes place between operational workers and administration, their sources refer to: 1) Psychological distance, workers don't feel involved in the organization and feel that their needs are not met. 2) Power and status, workers feel powerless and alienated; 3) Differences in value and ideology, this difference represents underlying beliefs on objectives and goals of an organization and 4) Scarce resources, disagreements regarding

benefits, salary and work condition. Vertical conflicts could basically occur because your supervisor is always telling you what to do and tries to micro-manage instead of letting you do your work (Musonye, 2010).

## **2.12 Effects of Conflict on Construction Projects and Industry**

Moderate levels of conflict leads to better performance and high levels of conflict reduce the team performance (Lam et al., 2007). Conflict may be the result of loyalty to something or attachment to something. Leung et al. (2005) have done a study of seventy five construction professionals including clients, project managers and project team members in Hong Kong to find the relationship between construction conflicts and participants' satisfaction. They found that moderate level of conflict gives optimum participant satisfaction and the increased levels of conflict diminish satisfaction. They also found that the participants have to balance between task and relationship for project performance. Conflict during construction works may affect one or more of these factors. In addition, conflicts may cause interruptions and occasionally suspension of the whole construction works (Al-Sibai & Alashwal, 2014).

Panteli and Sockalingam (2005) compiled the negative implications of conflict on team and organizational function as the following: promote inefficiency and ineffectiveness, lead to a loss of perspective regarding the task, inhibit individuals' cognitive functioning in assessing new information provided, processing complex information, and encourage

stereotype listening and induce the freezing out of iconoclasts from important discussions. In addition, Panteli and Sockalingam (2005) stated that trust and conflict are inherent issues of any organizational arrangement and central for knowledge sharing. Conflict, if managed properly, may have a positive impact on organization because it encourages searching for best alternatives. However, based on the previous discussion, conflict has been regarded as a destructive factor that has influence on team, organization, and inter-organization (Panteli & Sockalingam, 2005). Conflict is one of the causes that lead to construction project failure. Conflict can cause project delay, project cost overrun, productivity decrease, profit lost or impact in business relationship (Shuib et al., 2011). Conflict between project participants has been identified in various construction industries as being the principal causes of poor performance in construction projects. These conflicts occur at the organizational interface level where project participants with different organizational cultures which define their approach to work and relationships come into contact with other project participants (Ankrah & Langford, 2005). The conflict problem encountered in construction projects lead to prolonged delays in implementation, interruptions and sometimes time suspension.

### **2.13 Dispute resolution**

There are three main techniques (Gould, 2010):

1. Negotiation: The problem-solving efforts of the parties themselves;
2. Mediation or conciliation: A third party intervening in order to assist the parties to resolve their difficulties;
3. An adjudicative process: A final outcome is determined by a third party. This of

course includes construction adjudication, but litigation and arbitration also lead to binding decisions based on an assessment of the facts and law (Gould, 2010).

These three core dispute resolution principles can be further subdivided by particular techniques themselves. For example, expert determination is a contractual process where the parties agree that a third party will make a binding decision. The terms are governed by the contract. The decision of the expert will be final. It is, therefore, an adjudicative process. The term ADR meaning alternative dispute resolution (although the term appropriate dispute resolution is far better) describes not just mediation. Any alternative to litigation (and arguably arbitration) that leads to a resolution of the dispute is alternative. So this could include rapid construction adjudication, the use of dispute boards and expert determination. Negotiation in itself is not really alternative as this is the widely used bedrock of all settlements. Mediation is alternative in that it helps the parties to reach that settlement more quickly, while expert determination is alternative in that a binding decision is imposed more quickly and more economically than by arbitration or litigation (Gould, 2010).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

Chapter three of this presents methodology adopted to deal with the survey. It involves research design, targeted population, sampling technique and sample size, source of data, data collection instruments and procedure, pilot study and data analysis approach adopted. The chapter emphasizes on motives for adopting various strategies in dealing with issues understudy.

#### **3.2 Research design**

Research design entails basically strategy adopted by researchers to conduct a study. The design serves as guide upon which data collection and analysis are engineered during the process. The interpretations which emanates from results are carried out successfully due to the appropriate nature of the research design. This study adopted more of quantitative approach strategy to gather data on the subject understudy. The quantitative aspect here deals with measuring data gathered in numerical terms. The quantitative approach deals with deductive means of dealing with theories and measurement techniques adopted for



the study. The quantitative technique employs statistical tools to establish facts and causal relationship between variables contained in conflict issues on construction sites captured in the study. The quantitative approach was adopted due to its ability to generalize the findings with minimal errors. The qualitative approach on the other hand involves handling data in words out of the open-ended questions within the questionnaire. The study employs descriptive survey to collect data from targeted population.

### **3.3 Population**

Population can be said to be a group of people, objects, entities focused in a study whose characteristics are identified and discussed based on issues understudy. The target population of this study involves contractors, clients, employees of construction firms and consultants within Birim Central Municipality.

### **3.4 Sampling Techniques and Sample Size**

In the quest to get sample size for this study, non-probability sampling technique was employed in the process. The non-probability does not give each individual within the population the opportunity to be selected among the sample. With this approach, purposive and convenience sampling techniques were adopted in selecting the sample size. Purposive sampling technique was used in selecting contractors, consultants and clients. The reason was to ensure that there was comprehensive focus on core parties to disputes on projects which leads to conflicts. These are the main key stakeholders on projects and therefore, it was necessary to focus on them than other stakeholders within the construction industry. Convenience sampling was adopted to select individuals like employees of construction

firms within the Birim Municipal Assembly. In using this technique, the researcher ensured that individuals willing and available on various construction sites were selected for the study. This means that not all employees were given equal chance of been part of the sample size. To achieve the sample size, the researcher adopted a formular by Nwana (1992) which states that, it was appropriate to use 40-50% of individuals as sample size when the population is in few hundreds, 20% for more hundreds, 10% for few thousands and 5% for more thousands. Going by this logic, 50% was used as the sample size for each category of stakeholders selected for the survey.

**Table 3.1: Sample Size**

<b>Variable (Respondents)</b>	<b>Sampling Frame</b>	<b>Sample (50%)</b>
Contractors	16	8
Consultants	6	3
Clients	20	10
Employees (construction firms)	184	92
<b>Total</b>	<b>224</b>	<b>113</b>

Source: Survey data, 2018

### **3.5 Sources of Data**

Data for this study emanates from two main sources, namely primary and secondary. The primary data being first hand data were sourced from questionnaire conducted during the survey. Aside this, secondary data captures reports on conflicts on construction sites, its causes and effects on project success.

### **3.6 Data Collection Tools and Procedure**

This survey employed questionnaire as the medium for gathering data. The questionnaire was grouped into four sections. Section **A** presents demographic characteristics of respondents. Section **B** presents various causes of conflicts on site. Section **C** presents effects of conflicts on construction firms. Section **D** presents opinions of how conflicts can be managed better on construction projects. Five point Likert-scale was adopted largely to measure opinions of respondents on the issues stated earlier in the sections (Strongly agree–5, 4–Agree, 3–undecided, 2–Disagree and 1–Strongly disagree). The questions were closed and open – ended one in addition to dichotomous ones which needed Yes or No. The questionnaire were distributed to participants during break hours and in some cases, some of them indicated their preparedness to answer based on their interest in the topic.

Key: Where  $X$ = Weighted Mean, 4= Strongly Agree, 3=Agree, 2= Disagree 1=Strongly disagree. Where 1-1.5= Strongly disagree, 1.6-2.5=Disagree, 2.6-3.5=Agree and 3.5-4.0= Strongly agree and SD= Standard deviation

### **3.7 Validity and Reliability**

A pretest of the questionnaire was carried out Akim Manso from two construction sites. This was meant to ensure the validity and reliability aspect of the data to be collected. Ten questionnaires were distributed employees to answer, some recommendations in the form of rephrasing some questions were given the needed attention and addressed. This was meant to ensure accuracy of the questions to enhance validity of the data. Moreover, consistency in ensuring data gathered when analyzed, would yield the same results even upon adopting different methods.

### **3.8 Data Analysis**

Data gathered from field survey were subjected to thorough sorting, coding and then classified into various categories such as demographic characteristic of respondents (gender, age and their educational background), causes and effects of conflict on construction firms. Descriptive statistics, which takes the form of percentages; mean scores; and standard deviations; were employed in analyzing data. Moreover, Pearson Correlation Matrix being an inferential statistical tool was employed in establishing relationships between conflicts and, productivity and project success. The results were presented in tabular form and charts. The analysis was carried out with the help of Statistical Package for the Social Sciences (SPSS).

### **3.9 Study Area**

Birim Central Municipal Assembly was one of the districts elevated to a municipal status under LI 1863, in the year 2007 as part of the government's decentralization programme. The legislative structure of the Assembly is made up of 60 Assembly members of which 40 are elected and 20 are government appointees. The membership is made up of 50 males and 10 females of which the Member of Parliament and the Municipal Chief Executive are ex-officio members. The Municipal Assembly has 4 Zonal Councils namely; Akim Oda, Akim Asene/Aboabo, Akim Manso and Akim Akroso. The municipality shares boundaries with Akyemansa and Kwaebibirem Districts to the North, West Akim to the East, Birim South to the West, and Asikuma/Odoben-Brakwa and Agona East Districts to the South. The total land surface area is estimated to be 790.496 km<sup>2</sup> constituting about 3% of the total area of Eastern Region. The capital of the municipality is Akyem Oda. The total population of the municipality according to the 2010 Population and Housing Census is

144,869 with a consistent growth rate of 2.4% annually. Males Population was 69,304, representing 47.84% of the total population whereas females population was 75,565 representing 51.16% of the total population of the Municipality (Birim Central Municipal Assembly, 2013).

## **CHAPTER FOUR**

### **PRESENTATION OF RESULTS AND DISCUSSION**

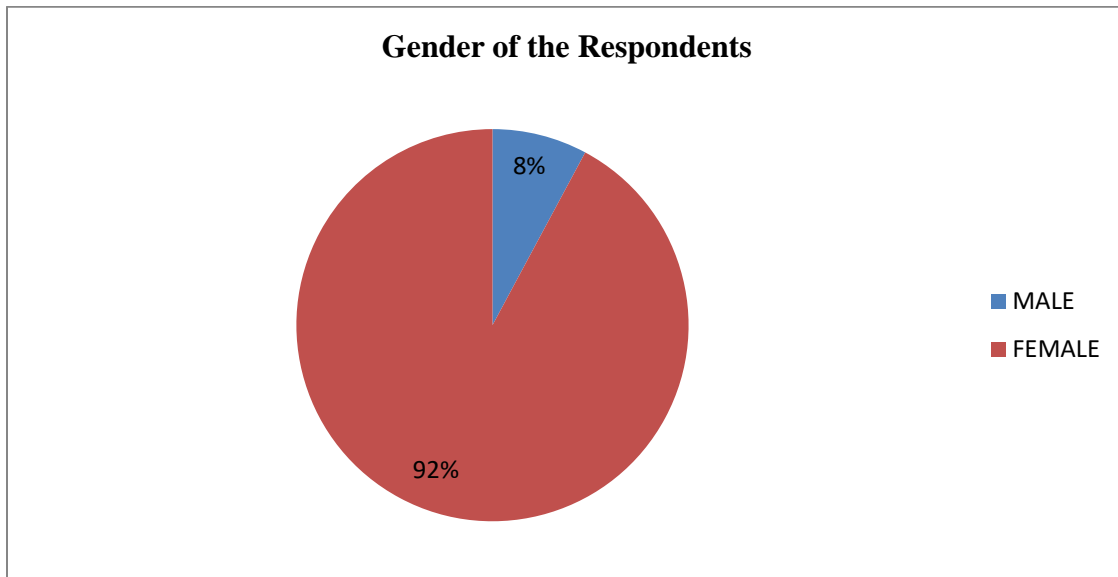
#### **4.1 Introduction**

Chapter four of this study brings out details on how results from the survey were presented out of data collected from respondents. It deals with the presentation of analysis and interpretations which accompanies the data. The analysis were made possible due to the adoption of SPSS. Factors dealt extensively within this section of the study include demographic characteristics of respondents, causes of conflicts on construction sites, effects of conflicts on projects and conflict resolution approaches adopted to curb the situation. The results were presented by adopting descriptive and inferential statistics in the form of Mean scores, Standard deviations and Pearson Correlation Matrix.

#### **4.2 Demographic Characteristics of Respondents**

The demographic characteristics of respondents in this study were centred on their gender, age, educational background and the number of year's respondents have worked at the construction industry. From the responses, it was established that out of 113 stakeholders selected for the sample size, 102 responded. This gives a response rate of 90%.

#### 4.2.1 Gender of Respondents

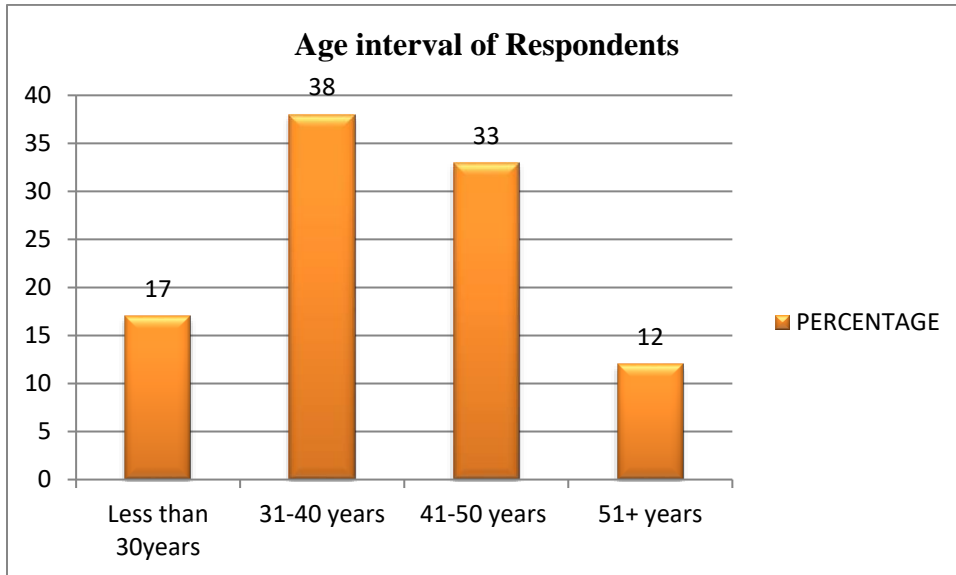


**Figure 4.1: Gender characteristics of Respondents**

Source: Field survey, 2018

It was established in Figure 4.1 that male respondents constituted majority been 94% whereas female respondents obtained 8%. The result gives an indication that there were more male respondents than females. From the responses, it appears that the construction industry has not been attractive to females as compared to their male counterparts. This might be as a result of the demanding nature of activities inherent in construction which adopts massive strength which most women may not be capable to handle as men. In the light of this, there was no positive link between a person's gender and conflict on construction projects.

#### 4.2.2 Age of Respondents

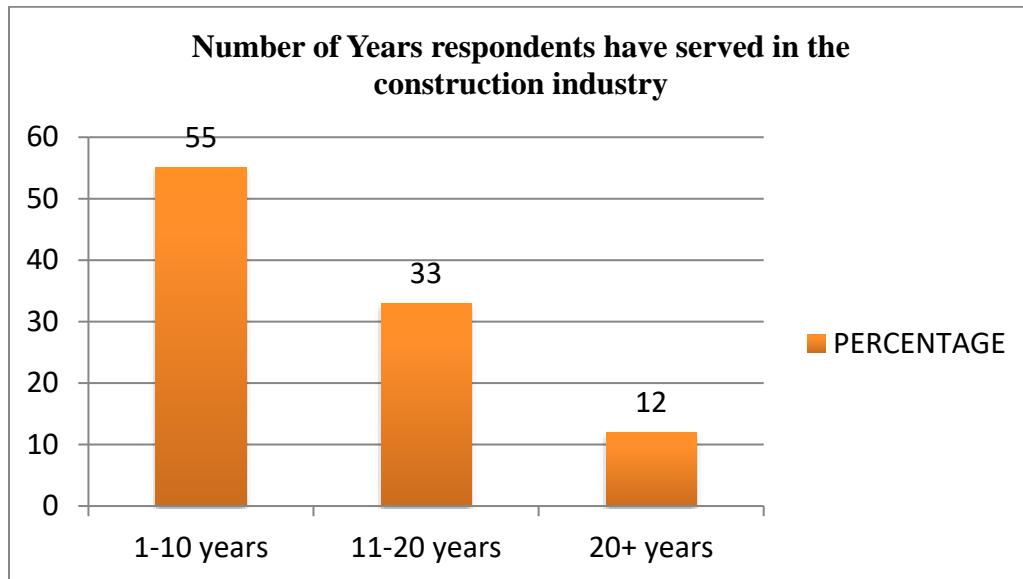


**Figure 4.2: Age interval of Respondents**

Source: Field survey, 2018

It became necessary to identify age brackets of respondents. Figure 4.2 shows that among the respondents, respondents within the age bracket of 31-40 years dominated most obtaining 38%. Next to this were respondents with age bracket of 41-50 years who obtained 33%. Some respondents were found to be less than 30 years with a percentage of 17 and the least been respondents with 51+ years of age who constituted 12%. The result depicts a youthful age category who are energetic towards their work. Once again the study could not establish a clear and positive relation between age of respondents and conflicts which occurs on construction site.

#### 4.2.3 Number of Years respondents have served in the construction industry



**Figure 4.3: Respondents years served**

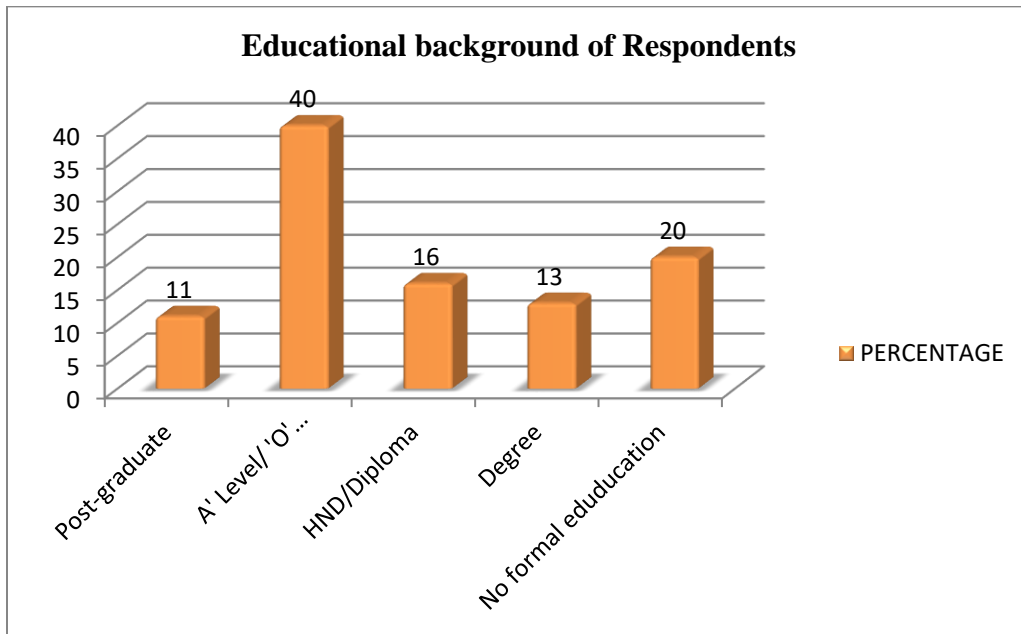
Source: Field survey, 2018

Ascertaining the number of years respondents have served in the construction industry was crucial to the study in the quest to know their level of experience on their job and its impact on relevant issues such as conflict management on projects. It was evidenced in Figure 4.3 that majority of respondents who responded to the questionnaires had served for 1-10 years and constituted 55%. It was found that 33% of respondents had been in the industry for 11-20 years. This was followed by some respondents (12%) who emphasised that they have served for 20+ years. The result implies that majority of respondents of the study had some considerable high level of experience at the municipality and were conversant with the



purpose of the study. Experience on the job was one good factor in determining how effective conflicts can be resolved on projects.

#### 4.2.4 Educational background of Respondents



**Figure 4.4: Educational background of Respondents**

Source: Field survey, 2018

It was appropriate to know the educational background of respondents to the study. As shown in Figure 4.4, majority of respondents were WASSCE/SSCE/ O' Level holders with 40%. Second to this were those with no formal education who constituted 20%. It was also shown that 16% have attained HND/Diploma, 13% degree and 11% post-graduate degree respectively. This gives an indication that majority of the respondents had attained average level of formal education. The educational background of respondents did not have direct bearing on conflict on construction sites.

### 4.3 Causes of conflicts on construction projects

**Table 4.1: Causes of conflicts on construction projects**

<b>Causes</b>	<b>Mean</b>	<b>SD</b>
Errors and omission in design	3.03	.18
Excessive quantity of works	3.62	.20
Difference in belief, orientation and demands	2.67	.24
Unrealistic expectation	3.58	.23
Mistrust	3.83	.20
Procurement method such as cost, delivery time and quality	3.61	.19
Failure of clients to honour payments	3.97	.17
Delays in time for project completion	3.63	.21
Breakdown in communication	3.91	.20
Conflicting commitment of project managers	3.64	.23
Absence of qualified personnel in key positions	3.18	.21
Differences in views among stakeholders	3.69	.21
Errors, defects or omissions in contract documents	3.25	.19
Behaviour of sub-contractors	2.98	.20
Lack of team spirit among project team members	2.76	.24
Deficient management	3.72	.21
Inadequate tracing mechanisms for request of information	2.64	.25
Supervision and coordination efforts on the part of the project	3.06	.22
Poor workmanship	2.53	.22
Mismanagement of funds by contractors	3.86	.18
Poor planning and budget estimating	3.75	.21
Poor record keeping and final accounts disagreements	3.77	.23

Source: Field survey, 2018

In responding to the issue on causes of conflicts on construction projects, it was found that the most dominant factor which most respondent rated was failure of clients to honour payments (Mean= 3.97, SD= .17). For projects to be executed successfully, there is the need for timely release of funds to procure necessary resources and pay workers. In some cases, inability of clients to honour such obligations tend to create problems during project implementation. Failure to provide adequate payments to contractors frustrate their ability to undertake activities on site effectively and makes their work very difficult. In some circumstances, contractors who pre-finance projects are left stranded due to their inability to honour their debt obligations toward banks. These circumstances create disaffection among parties on projects because workers would not take it lightly on the contractor upon failure to pay their wages and salaries. That itself is more problematic in the quest to achieve fruitful outcomes on tasks assigned to workers. This result is in line with submissions of Narh et al. (2015), Leong et al. (2011) and Bvumbwe and Thwala (2011) that failure of clients to honour payments on time was among the main causes of conflicts in the construction industry.

The second factor rated by most respondents was breakdown in communication (Mean= 3.91, SD= .20). Information sharing is vital in ensuring project success through effective communication. Breakdown in communication among parties on projects affects smooth flow and dissemination of information to promote effective implementation. Lack of adequate and effective utilisation of information during project makes coordination, supervision and monitoring difficult to undertake. Ineffective communication among

stakeholders on construction projects make it difficult for workers to be well informed on how task assigned should be executed to meet set standards. Poor communication on project promotes difficulty for workers to be informed on their line of duty and other chain of command on site. Moreover, conflict arises out of poor sharing of information between client and contractor. Narh et al. (2015), Gyulay (2012), Yates (2003), Al-Sibai and Alashwal (2014) and Bvumbwe and Thwala (2011) shared similar views that poor communication was a key issue which lead to conflicts among stakeholders during construction activities.

Aside these, the third dominant factor was mismanagement of funds by contractors (Mean= 3.86, SD= .18). Prudent management of funds ensure resources are used for their purposes with right quantity and quality. On the contrary, in the event where contractors misapply funds on projects which lead to cost overrun, it promotes conflict. The client will definitely not be comfortable and enthused with such acts since he/she would be the ultimate loser in the end. Mismanagement of funds by contractors on site was regarded detrimental tool which deprives workers from receiving deserved workmanship and these results in contractor-workers conflict. Al-Sibai and Alashwal (2014) and Bvumbwe and Thwala (2011) alluded mismanagement of funds by contractor during construction project was a causal factor which leads to conflicts. Apart from these three main dominated factors, it was established that mistrust, poor record keeping and final accounts disagreements, poor planning and budget estimating, deficient management and procurement method such as cost, delivery time and quality were other crucial factors which led to conflicts on projects.

#### 4.4 Effects of conflicts on construction projects

**Table 4.2: Effects of conflicts on construction projects**

<b>Effects</b>	<b>Mean</b>	<b>SD</b>
Conflict reduce team performance	3.11	.24
Project delay	3.85	.22
Encourages searching for best alternatives	2.84	.23
Profit lost	3.54	.21
Increased levels of conflict diminish satisfaction	3.76	.19
Promote inefficiency and ineffectiveness	3.72	.20
Project cost overrun	3.68	.23
Interruptions and occasionally suspension of the whole construction works	3.96	.22

Source: Field survey, 2018

The researcher found it imperative to examine effects of conflicts on construction projects. Responses shown in Table 4.3 indicate the most dominant effect resulting from conflict was interruptions and occasionally suspension of the whole construction works (Mean=3.96, SD= .22). The occurrence of unresolved conflicts during project implementation disrupt work activities on site. Conflicts breakdown communication among parties and create hostility at the working environment which does not promote congenial atmosphere for workers. Conflicts can escalate into total suspension or abandon

of projects on construction sites. This can be triggered through entrenched position taken by clients, consultants and contractors in most cases. For instance, delay in payments to contractors have led to suspension of work on many construction site due to the difficulty in procuring needed resources and ability to pay workers on site. Al-Sibai & Alashwal (2014) indicate conflict during construction works may lead to interruptions and occasionally suspension of the whole construction works. Ankrah and Langford (2005) emphasised that prolonged conflicts create dissatisfaction among parties and in extreme cases suspension of work on site.

The second most rated factor by respondents has to do with project delay (Mean=3.85, SD=.22). Projects are delayed when there are uncontrolled conflicts during construction activities. Delay can affect timeframe expected to complete projects. The time overrun which emanate from delays has repercussions on total cost on projects due to fluctuation in prices. Unresolved conflicts during execution of project lead to unnecessary delays which affect trust, commitment and productivity. Shuib et al. (2011) posits that conflict can cause project delay. Increased levels of conflict diminish satisfaction and has also contributed damaging effects of conflicts on projects (Mean=3.76, SD= .19). Continuous acts of conflicts among parties on projects lead to increase rate of dissatisfaction. The morale of workers are affected negatively towards work when there is frequent disputes among parties on a project. Satisfaction on work is diminished when conflict are not well managed and handled on site. This supports the work of Leung et al. (2005) which state that increased levels of conflict diminish satisfaction.

#### 4.5 Conflict management practices on construction projects

**Table 4.3: Conflict management practices on construction projects**

<b>Conflict management</b>	<b>Mean</b>	<b>SD</b>
Mediation	3.75	.20
Negotiation	3.78	.18
Compromise	3.54	.21
Avoiding/withdrawing	3.69	.22
Force	2.86	.19
Smoothing	3.30	.20
Litigation	3.11	.18
Problem solving	3.63	.20

Source: Field survey, 2018

It was appropriate after identifying effects of conflicts on project to identify various strategies suitable to curb the situation. It was shown in Table 4.4 that negotiation was the highest rated factor which most respondents preferred as best option to deal with conflicts on projects (Mean=3.78, SD= .18). The idea of negotiating when there is conflict among parties during project execution is to allow reaching considerable consensus on how issues should be handled per their offers and acceptances. The parties themselves try to resolve issues confronting them by presenting their cases or submissions and reaching an agreement acceptable to all parties. Effective negotiation skill is one profound qualities

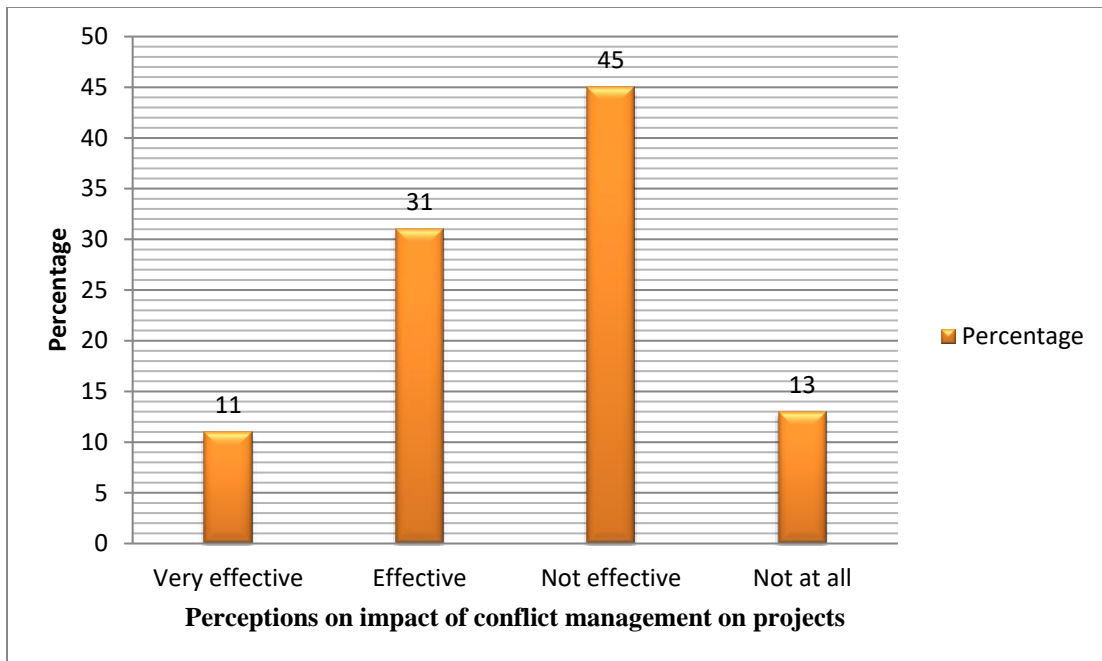
project managers are expected to have in resolving conflicts on projects. Gould (2010) in his submissions did indicate negotiation involves a situation where parties with conflicting issues solve their problem themselves through consensus building.

Mediation was found to be crucial factor which facilitates curbing of conflicts on construction projects (Mean= 3.75, SD= .20). Mediation is adopted to solve conflicts when a third party is engaged to fairly deal with issues for the aggrieved parties to reach a consensus. The mediator does not dictate to the parties how issues should be handled. The mediator clarifies and justifies why he/she brings onboard decisions which can be adopted for peace to prevail. The decision arrived by the mediator in the end is not binding on the parties. It is incumbent on the mediator not to take sides. El-Mestekawi et al. (2007) emphasised that the mediator undertakes to clarify each party's concept of the facts, priorities and positions; loosens rigid stances; explores alternative solutions; and seeks tradeoffs. It has been espoused by Gould (2010) that mediation is an alternative tool upon which settlement of disputes can be reached more swiftly with an input from an expert who is impartial towards issues in contention.

Aside negotiation and mediation, it was established that avoidance or redrawing strategy was the third most dominant factor respondents felt was appropriate in dealing with conflicts (Mean= 3.69, SD= .22). The avoidance strategy is where ignoring a potential situation which may cause conflicts on projects. Ignoring the said situation will ensure matters do not escalate into undesirable outcomes. With this approach, a bone of contention is completely ignored to prevent further misunderstandings between parties.



#### 4.6 Perception on conflict management on construction projects



**Figure 4.5: Perception on Conflict management on construction projects**

Source: Field survey, 2018

The researcher found it appropriate to identify the extent to which conflict management on construction projects within Birim Municipal Assembly have been effective in achieving desirable results. Responses shown in Figure 4.5 indicate majority of respondents perceived conflict management systems on projects have not been effective. This assertion was endorsed with an overwhelmingly percentage of 45%. However, 31% were of the view that conflict management on projects have been effective. Subsequently, it was found that 13% of respondents held the view that M&E were effective. Moreover, sections of respondents held contrary view by indicating that it has not been effective at all. The overall

implication to this effect indicate that there have been poor implementation of conflict management approaches on projects. Though, there exists some form of conflict management strategies on construction projects but as to whether it has been adequately effective is another bone of contention.

#### 4.7 Relationship between Conflicts and Project success on construction projects

**Table 4.4: Correlation between Conflict on construction site and Project success**

		Project success	Conflict
Pearson	Project success	Correlation coefficient	1.000
		Sig. (2-tailed)	.723*
		N	102
	Conflict	Correlation coefficient	.723*
		Sig. (2-tailed)	1.000
		N	102

Source: Fieldwork, 2018

*\*Correlation is significant at the .05 level (2-tailed)*

Table 4.4 presents responses on relationships between conflict and project success on construction site. A positive correlation co-efficient of \*.723 was found to exist between conflict and project success on construction site. This was significant at 0.5. This is a strong positive association between project success and conflicts on projects. In view of this, it was established that as prudent measures on conflict management are put in place during construction activities, it leads to corresponding improvement in efficiency and effectiveness on work output. Inference can be made that adopting effective and appropriate conflict management strategies during project implementation has the

tendency of motivating and boosting morale of employees on projects. Panteli and Sockalingam (2005) alluded that conflict when effectively managed during project execution can lead to better alternatives in performing certain actions beneficial to ensuring successful project outcomes.

#### 4.8 Relationship between Conflict management and Productivity of construction firms

**Table 4.5: Correlation between Conflict management and Productivity of construction firms**

			Productivity	Conflict management
Pearson	Productivity	Correlation coefficient	1.000	<b>.765*</b>
		Sig. (2-tailed)		.026
		N	102	102
	Conflict management	Correlation coefficient	.765*	1.000
		Sig. (2-tailed)	.026	
		N	102	102

Source: Fieldwork, 2018

*\*Correlation is significant at the .05 level (2-tailed)*

A correlation co-efficient of \*.765 obtained shows a strong and positive relationship between productivity and conflict management on construction projects. It can be stated that productivity on projects are positively related with prudent conflict management strategies adopted to deal with disputes during project implementation processes. This presupposes that an improvement in conflict management practices on projects will have corresponding increase in the level productivity. This assertion was set at significant level of 0.5. The existence of sustainable measures to deal with conflict situations on projects

ensure effective communication among stakeholders, enhance healthy working relations among employees and management, increase efficiency and effectiveness on performance of task assigned which leads to improve productivity. When conflict resolution strategies are successful, it leads to increase in productivity since employees becomes efficient in their activities. As the conflict resolution improves, there is likelihood of better performance and use of appropriate measures to achieve desirable results and this has the tendency of increasing productivity on projects. These support the position of Aula and Siira (2010) that a careful conflict management lead to increase in productivity.



## **CHAPTER FIVE**

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

#### **5.1 Introduction**

This chapter presents summary of the findings that emanated from the study, it presents the conclusions made based on the findings and suggestions/recommendations made to curb incidence of conflicts on construction projects.

#### **5.2 Summary of Findings**

It has been established from the study that among the causes of conflict on construction projects at Birim Municipal Assembly was the issue of inability of clients to honour payments to contractors. Financial resource is the pivotal tool which every project rest on. The success of projects lies on availability of funds to procure needed resources, logistics and pay workers. Failure on the part of clients to deliver timely payments to contractors tend to frustrate work processes on site which lead to conflict. Next to this was breakdown of communication. Conflicts arise out of poor communication among stakeholders on construction projects. The existence of poor and ineffective channels of communication on projects make information dissemination and utilisation very difficult. It breeds controversy on how employees are expected to undertake certain tasks on site and expected standards to meet. Lack of smooth flow of information on work impede its success. The third most rated causal factor was mismanagement of funds by contractors. Inability of contractors to take prudent measures in managing resources especially finances create misunderstanding between them and clients and in some cases, the workers in general.

Misappropriation of funds by contractors create disaffection among workers since their wages and salaries are affected through such acts.

It was found that among the key effects of conflicts on construction project was interruptions and occasionally suspension of the whole construction works. Unresolved and protracted conflicts during projects interrupt smooth delivery of activities and in extreme cases, lead to total abandonment. Another concern enumerated by respondents on the effects was project delay due to conflicts. Conflict hinders expectations on projects and cause delays. When projects are delayed, it has influence on cost and time overruns. This is due to fluctuation in prices of project materials and workmanship based on economic indicators which exist at a particular point in time. The higher prices shot up, the higher extra cost incurred on delayed projects. Conflicts among parties on projects lead to increase rate of dissatisfaction. Conflicts demotivate and demoralise workers to give out their best. The occurrence of conflict on projects undermines healthy relations at the workplace and this sometimes affect workers zeal to give out their best.

It was established from the findings that negotiation was one of the most effective strategies to deal with conflicts on projects. This is a situation where aggrieved parties on a project reach consensus on how issues should be undertaken through cordial means. Next to this was mediation which involves a third party hired who is supposed to be neutral and fair in his conclusions over issues raised by parties involved in the conflict. The conclusion reached by the mediator is however not binding on the parties. It was found that conflicts have major influence on productivity and overall success of a project. Unresolved conflicts affect fortunes of productivity on a project and its success become questionable.

Eventhough, some conflict management strategies have been adopted, responses from the survey indicated their application have not yielded expected results to curb conflict on projects.

### **5.3 Conclusions**

The issue of conflicts on construction projects has been a crucial factor which influences productivity. The main causes of conflicts on most construction project sites at Birim Municipal Assembly were failure of some clients to make payments to contractors on timely bases, breakdown of communication, mismanagement of funds by contractors and mistrust among parties. These have resulted in suspension of projects and in some cases, total abandonment. The occurrence of these unresolved conflicts have led to delays attracting time and cost overruns which affect negatively profit margins of contractors and increase overall cost of projects to clients. Existence of conflicts has led to massive dissatisfaction among workers which affect productivity negatively in the end. Negotiation and mediation have been used widely as form of strategic conflict resolution tools to curb the incidence of conflicts on construction projects. Despite the introduction of these systems, much has not been achieved in the quest to minimize conflicts on projects.

### **5.4 Recommendations**

Based on the findings, it is expected that clients ensure timely delivery of funds to contractors. This will enhance their ability to procure needed resources timely and at the right quantity and quality. This situation will minimise the likelihood of misunderstanding emanating from unavailability of funds. Contractors are also expected to manage resources entrusted to them by clients especially finances well. Prudent measures should be taken on

managing financial resources and other logistics on site. This will ensure value for money and good accountability which will maximise satisfaction on project delivery on the part of clients.

It is incumbent on all parties to a project to ensure adequate and smooth flow of information. Proper and easy access to information through proper communication channels will enhance better utilisation of information for desirable project outcome. This will ensure healthy working relations among employees and management of construction project activities. It is expedient to ensure that projects are completed within specific timeframe set by parties to the contract. This will minimise the likelihood of cost overruns with its associated cost implications to both contractors and clients.

It is crucial for construction firms to adopt effective conflict management tools suitable for resolving disputes as they occur based on any given circumstance. This would help prevent or reduce the tendency of conflicts on projects. Adequate training should be provided for actors within the construction industry on how to effectively deal with conflicts on project. This will help in promoting the use of effective strategies to curb the situation as they emerge.

### **5.5 Suggestions for future studies**

This study was concentrated on Birim Municipal Assembly only without taking into consideration other districts within the Eastern Region. It is expected that future studies deal extensively on the impact of conflicts on performance of construction firms using the entire Eastern Region and beyond.



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## APPENDIX

### QUESTIONNAIRE FOR EXAMINING THE IMPACT OF CONFLICT ON CONSTRUCTION PROJECTS: A CASE STUDY OF BIRIM MUNICIPAL ASSEMBLY

#### QUESTIONNAIRE

This study is being conducted to examine the impact of conflict on construction projects in the Birim Municipal Assembly. The researcher is a Master of Technology (Construction) student who would appreciate very much if you could take some time off your tight schedule to complete the questionnaire. The questionnaire is for academic purposes only and the responses will be treated with the utmost confidentiality.

#### SECTION ONE: DEMOGRAPHICS OF RESPONDENTS

**All responses will be confidential and will not be connected in any way to yourself or your institution**

#### **SECTION A: Background Information of Respondents.**

1. Please indicate your gender. *Please tick* [✓]

Male  Female

2. What age category do you belong? *Please tick* [✓]

a. Less than 30 years

b. 31 – 40

c. 41-50

d. 51+

3. What is your highest educational qualification? *Please tick* [✓]

a. J. H.S  c. HND

b. S. H. S  d. First degree

e. Post-graduate

f. No formal education

Others (Please state) \_\_\_\_\_

4. How long have been in the construction industry? (*Please tick*)

a. Less than a year

b. 1-10 years

c. 11-20 years

d. 20+ years

Other (Please state) \_\_\_\_\_

## SECTION B: CAUSES OF CONFLICT ON CONSTRUCTION PROJECTS

5. Rank the following components of **causes of conflict on construction projects** in a range of one (1) to five (5) with one (5) being the most important factor and (1) being the least important factor. Just tick (✓) the blank space for the answer which is right to you.

No.	CAUSES OF CONFLICT	RESPONSES				
		1	2	3	4	5
1	Errors and omission in design					
2	Excessive quantity of works					

3	Difference in belief, orientation and demands					
4	Unrealistic expectation					
5	Mistrust					
6	Procurement method such as cost, delivery time and quality					
7	Failure of clients to honor payments					
8	Delays in time for project completion					
9	Breakdown in communication					
10	Conflicting commitment of project managers					
11	Absence of qualified personnel in key positions					
12	Differences in views among stakeholders					
13	Errors, defects or omissions in contract documents					
14	Deficiencies in designs					
15	Behaviour of sub-contractors					
16	Lack of team spirit among project team members					
17	Deficient management					
18	Inadequate tracing mechanisms for request of information					
19	Supervision and coordination efforts on the part of the project					
20	Poor workmanship					
21	Mismanagement of funds by contractors					
22	Poor planning and budget estimating					
23	Poor record keeping and final accounts disagreements					

**SECTION C: EFFECTS OF CONFLICTS ON CONSTRUCTION PROJECTS**

7. Rank the following components of **EFFECTS OF CONFLICTS ON CONSTRUCTION PROJECTS** in a range of one (1) to five (5) with one (5) being the most important factor and (1) being the least important factor. Just tick (✓) the blank space for the answer which is right to you.

No.	EFFECTS	RESPONSES				
		1	2	3	4	5
1	Conflict reduce the team performance					
2	Increased levels of conflict diminish satisfaction					
3	Interruptions and occasionally suspension of the whole construction works					
4	Promote inefficiency and ineffectiveness					
5	Lead to a loss of perspective regarding the task					
6	Encourage stereotype listening and induce the freezing out of iconoclasts from important discussions					
7	Encourages searching for best alternatives					
8	Project delay					
9	Project cost overrun					
10	Profit lost					
11	Poor performance					

8. In your view, do you think conflict on site have any impact on productivity? Yes

[ ] No [ ]

State reasons for your answer.....

9. What is the effect of conflicts on project success?

.....  
 .....

**SECTION D : CONFLICT MANAGENT PRACTICES ON CONSTRUCTION PROJECTS**

10. Rank the following components of **conflict management practices on construction projects** in a range of one (1) to five (5) with one (5) being the most important factor and (1) being the least important factor. Just tick (✓) the blank space for the answer which is right to you.

No.	FACTOR	RESPONSES				
		1	2	3	4	5
1	Force					
2	Smoothing					
3	Withdrawing					
4	Compromise					
5	Problem solving					
6	Negotiation					
7	Mediation					
8	Litigation					

11. In your view, how would you rate conflict management on construction projects?

- a. Effective [    ]
- b. Very effective [    ]
- c. Ineffective [    ]
- d. Not at all [    ]

State reasons for your answer.....

12. In what ways can conflict management be improved on construction projects?.....