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ASSESSMENT OF CONFLICT MANAGEMENT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

by

ADEYEMI BENJAMEN SUNKANMI

A DISSERTATION

submitted in partial fulfilment of the requirements for the degree

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in

CONSTRUCTION MANAGEMENT

in the

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

at the

UNIVERSITY OF JOHANNESBURG

SUPERVISOR: PROF. C.O. AIGBAVBOA

2019
ASSESSMENT OF CONFLICT MANAGEMENT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

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SUPERVISOR: PROF. C.O. AIGBAVBOA

A DISSERTATION submitted in partial fulfilment of the requirements for the award of the degree Magister Technologiae in Construction Management in the Faculty of Engineering and the Built Environment, Department of Construction Management and Quantity Surveying at the University of Johannesburg, Republic of South Africa.

JOHANNESBURG, JUNE 2019
DECLARATION

I, ADEYEMI BENJAMEN SUNKANMI, hereby declare that this dissertation is the outcome of my exploration and research, apart from the extent indicated in the references and by comments included in the body of the report, and that it has not been presented somewhere else for a similar purpose. It was submitted to the University of Johannesburg, (Department of Construction Management) as a requirement to obtain a MAGISTER TECHNOLOGIAE degree in CONSTRUCTION MANAGEMENT.

Signature                                                                                                          Date

University of Johannesburg

Dornfontein Campus
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DEDICATION
I hereby dedicate this dissertation to Mr. and Mrs. Adeyemi for their parental support, prayers and effort.
ABSTRACT

This study investigated the factors that cause conflict among construction professionals and the impacts of construction professionals’ conflict on performance. It also examines the methods of resolving conflict among construction professionals, the benefits of conflict resolution, and the factors influencing conflict management among construction professionals in Nigeria’s construction industry. The Nigerian construction industry plays a significant role in the development of the Nigerian economy. It contributed 662,431.53 million naira to the gross domestic product in the fourth quarter of 2018. It therefore means that the construction industry is a key partner in the development of Nigeria. This industry is home to different categories of professionals performing various construction duties. The key professionals engaged in the construction industry in Nigeria include quantity surveyors, architects, builders, civil engineers, project managers and construction managers.

An industry that is home to different professionals from different backgrounds and training usually experience misunderstandings during daily interactions that can lead to conflict. This conflict may occur among the construction professionals owing to different circumstances that usually arise. On this basis, a set of questionnaires was administered to construction professionals in Ondo and Lagos State to ascertain the extent of conflict management among the construction professionals in Nigeria. The questions in the questionnaire were designed from the reviewed literature and implemented using Google Forms which was sent to the email of the respondents.

One hundred and fifty (150) questionnaires were administered and one hundred and thirty-five (135) questionnaires were received from the respondents, represent 90% response rate. These one hundred and thirty-five responses were analysed with the descriptive statistics and exploratory factor analysis (EFA) technique. The summary of the analysis of the respondents shows that the major cause of conflict among the professionals is favouritism. In addition, role ambiguity which occurs owing to improper definition of the role of the different construction professionals leads to misunderstandings, culminating in conflict. Other causes of conflict among construction professionals in Nigeria include differences in professionals’ experience, differences in levels of education, differences in personalities, and differences in professionals’ goals and views. Similarly, conflict leads to the abandonment of the professionals’ work was ranked highest by the respondents in terms of impacting on the performance of construction
professionals’ conflict in the Nigerian construction industry. This was followed by conflict leads to inadequate communication among the construction professionals, conflict creates job pressure, conflict leads to frustrations among professionals in carrying out their work, and displeasure among the construction professionals. However, the study revealed that methods of resolving conflict among the construction professionals include collaborating, accommodating, negotiating, compromising, mediating, and arbitrating. Similarly, the benefit of conflict resolution which was ranked highest by the respondents is the generation of new insights and perception among the construction professionals. These are followed by reduced tension and hostility, and the speedy accomplishment of duties or tasks. The study identified poor leadership, inadequate communication, rudeness, cultural barriers and lack of trust among professionals as the major factors influencing conflict management among construction professionals in Nigeria.

The study recommends that construction professionals must desist from factors that can cause conflict among them. Strict adherence by construction professionals in Nigeria will encourage a free flow of ideas and progress among the construction professionals. This will actually lead to improvement on professionals tasks. The study encourages unity among the professionals in the Nigerian construction industry. Finally, construction professionals in Nigeria should consciously strive to reduce conflict by means of proper communication, good leadership, avoiding favouritism and establishing more collaboration with other construction professionals.

**Keywords:** Conflict management, Construction industry, Conflict impacts, Conflict resolution methods, Construction professionals
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LIST OF ABBREVIATIONS

CI     Construction industry
CIDB   Construction industry development board
CP     Construction professional
CM     Conflict management
CR     Conflict resolution
GZ     Geopolitical zone
GFCF   Gross fixed capital formation
SACI   South African Construction Industry
GDP    Gross domestic product
FC     Function conflict
DC     Dysfunctional conflict
NCI    Nigerian construction industry
SPSS   Statistical Package for the Social Science
OCED   Organization of Economic Co-operation and Development
RSA    Republic of South Africa
PCA    Principal component analysis
MIS    Mean item score
EFA    Exploratory factor analysis
KMO    Kaiser-Meyer-Olkin
SD     Standard deviation
LIST OF PUBLICATIONS


CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND

This dissertation focuses on conflict management among professionals in the Nigerian construction industry. This introductory chapter describes the general background of the study. The chapter outlines the components of the study as well and offers the structure. The research aim, the significance of study, the problem statement, the research questions, the research objectives, the motivation for this study, the purpose of study, as well as the delimitation and limitation of the study also form part of this chapter, as well as the research methodology followed.

1.2 GENERAL BACKGROUND

The construction industry (CI) in Nigeria continues to be an essential industry in the economy of the country even though its contribution is smaller than that of other industries. In the construction industry there are professionals involved to perform their tasks. The construction professionals (CP) play a significant role in the construction industry. Therefore, construction professionals are the backbone of construction industry. However, in every construction industry where professionals are working, conflict is unavoidable. According to Dada (2013:1), conflicts often occur among construction professionals and may lead to uncomfortable situations. Tarshi and Peansupap (2013) describe conflict as a perceived misunderstanding and violence among professionals about something relating to individual interests, different opinions, diverse ideas and incompatible goals.

A study by Sudhhaker (2015:214) indicates that conflict is unavoidable among construction professionals over decisions, sharing ideas and differing views in the construction industry. Barasa, Chege and Irawo (2015: 267) also describe conflict as a situation of various expectations on things that are important and in which one of the construction professionals are involved. Nair (2008: 360) states that conflict is a breakdown of a quality process of making decisions in the construction industry. According to Jaffer, Abdul-Tharim and Shuib (2011), conflict is an obstacle and misunderstanding that need to be investigated. However, it means in every construction industry where different professionals are engaged, conflict is likely to occur. Construction professionals’ conflict is unavoidable and it occurs in cases of misunderstanding
over tasks, communication issues, and differences in professionals’ needs and opinions, just in as the case of conflict between construction employee and the employer (Vokic & Sontor 2009:4). However, conflicts can occur among the professionals where experience and age can be a barrier. Beth and Thomas (2016: 234) state that conflict is the main concern among professionals in the construction industry. Anywhere where professionals have different opinions, views and beliefs but share the same goal that works toward the progress of construction industry, conflict is unavoidable. It involves the recognition of conflicts and the categories of conflicts and taking the required steps to apply the appropriate conflict handling styles. Conflict management is a method used by the professionals to ensure the impacts of their overall performance on a particular task (Kuhn & Poole, 2000). Furthermore, conflict management and professionals’ decision making in the construction industry cannot be separated owing to the contract between them which allow the professionals to ensure that work is done in the construction industry (Kuh & Pole, 2000). Mosaic (2012) states that conflict management is the key skill, especially if a professional is not involved in the dispute, but is advising one or more disputants. The key to conflict management is acknowledgement of the real facts, exercising patience before taking decisions and endeavouring to listen to other parties.

Furthermore, some factors that cause conflicts among professionals are discussed in this research. Some of the factors are indiscipline among professionals, differences in goals and views, differences in personalities, favouritism among professionals, change order among professionals, and poor dissemination of information. Differences in goals and views among construction professionals cause conflict in the construction industry (Johdi & Apitree, 2012). The impacts of construction professionals’ conflict on performance were generalized and discussed in this study. Conflict can be good if managed well and conversely, conflict can be bad if not managed well. Conflict can be good and bad, it depending on how it is been managed. Conflict creates better trust among professionals, but conflict can also create job pressure, and dissent among professionals. The resolution of conflicts will help the professionals in the construction industry in promoting good will and improving performance.

When unresolved problems are given the chance to explode into violence, then conflicts become unbearable and can lead to serious problem. In this research study, methods of resolving conflict among professionals in the construction industry were fully assessed. Vokic and Sontor (2009) state that compromising is commonly used style in resolving conflicts. Also, factors influencing
Conflict management among construction professionals were evaluated in this study. Conflict management among construction professionals can be influenced by a culture that encourages honesty (Toku, 2014:23). Therefore, the study assessed various factors that cause conflicts among the construction professionals, the impacts of construction professionals’ conflict on performance, methods of resolving conflict amongst construction professionals, the benefits in resolving conflict among professionals, and factors influencing conflict management among construction professionals in Nigeria.

1.3 RESEARCH AIMS
The aim of this research study was to critically investigate various factors that cause conflicts among construction professionals in the Nigerian construction industry. Also, the study assessed the impacts of construction professionals’ conflict on performance. The other aim of this study was to identify methods of resolving conflict among construction professionals. This study was also aimed to assess various benefits of conflict resolution among construction professionals and the factors influencing conflict management among construction professionals in Nigeria.

1.4 SIGNIFICANCE OF STUDY
Construction professionals are failing to accomplish their goals in the Nigerian construction industry due to frequent occurrences of conflict among them. The findings from this research could contribute to the knowledge of conflict management among professionals. This study provides construction professionals with the knowledge of the various factors that cause conflict, the impacts of construction professionals’ conflict on performance, the most effective methods of resolving conflicts, the benefits of resolving conflict among professionals, and factors influencing conflict management among construction professionals.

1.5 PROBLEM STATEMENT
Conflicts among the construction professionals have been the foremost causes of setbacks in the construction industry. Conflicts that are not well-managed are significant issues among the professionals which usually lead to work damage, frustration among professionals, a climate of mistrust, and poor communication among professionals. Conflicts are challenging to avoid but the indications of conflicts can be traced in order to resolve conflicts at the time when these conflicts start to emerge among the professionals in the construction industry (Khan et al, 2016: 153). Conflict becomes real when it manifests itself in arguing, threatening, or fighting. The
problem lies with the inability of construction professionals to manage and resolve it effectively. If conflict is managed effectively, conflict can be constructive. If not, conflict can be a destructive force among the construction professionals in Nigeria. Without an in-depth analysis of conflicts among professionals, the issues of conflict will remain a threat to the construction sector in Nigeria. Therefore, this study examined various factors that cause conflict among construction professionals in Nigeria and recommends the most effective methods of resolving this conflict.

1.6 RESEARCH QUESTIONS
The research questions for this study are the following:

1. What are the factors that cause conflict among construction professionals in the Nigerian construction industry?

2. What are the impacts of construction professionals’ conflict on the performance of the Nigerian construction industry?

3. What are the methods of resolving conflict among construction professionals in the Nigerian construction industry?

4. What are the benefits of conflict resolution amongst the construction professionals in the Nigerian construction industry?

5. What are the factors influencing conflict management in the Nigerian construction industry?

1.7 RESEARCH OBJECTIVES
The objectives for this research are the following:

1. To investigate factors that causes conflict among construction professionals in the Nigerian construction industry;

2. To assess the impacts of construction professionals’ conflict on the performance of the Nigerian construction industry;

3. To assess the methods of resolving conflict among the construction professionals in the Nigerian construction industry;

4. To assess the benefits of conflict resolution among construction professionals in the Nigerian construction industry; and
5. To assess factors influencing conflict management among construction professionals in the Nigerian construction industry.

1.8 MOTIVATION FOR THIS STUDY
The motivation for carrying out this study was to enhance the knowledge of construction professionals on conflict management. The results of this study add toward a better understanding of the various factors that cause conflict among construction professionals (CPs) in Nigeria. The study also provides more knowledge on the impact of construction professionals’ conflicts on performance. Furthermore, the methods of resolving conflicts and the benefits of conflict resolution among professionals were assessed and this contributes to the enhancement of professional knowledge on conflict management. It also adds to the better understanding of the factors influencing conflict management among professionals.

1.9 PURPOSE OF STUDY
Generally, owing to conflict that usually occurs among the professionals in the Nigerian construction industry, there is a need for these professionals to be equipped with the right methods of resolving conflict in the construction industry. Therefore, the purpose of this study was to examine factors that cause conflicts and to determine methods of resolving conflict among the construction professionals in Nigeria.

1.10 DELIMITATION
This study looks into conflict management among the construction professionals in the Nigerian construction industry. The survey was conducted with the use of a structured questionnaire with closed-ended questions administered to construction professionals working in south-western zone of Nigeria since the whole of Nigeria cannot be covered.

1.11 LIMITATION OF STUDY
In this study, the assessment of conflict management (CM) among professionals in the Nigerian construction industry was conducted. This study was targeted at quantity surveyors, architects, builders, construction managers, project managers and civil engineers. This study reviewed some literature relating to conflict management among the professionals. However, no interviews were conducted for construction professionals.
1.12 RESEARCH METHODOLOGY AND DESIGN

According to Rajasekar et al (2006), research methodology is the procedure whereby researchers go about their work describing, clarifying and forecasting occurrences. The research methodology was adopted to ensure that the study was done perfectly. The geopolitical zone (GZ) in which the research study was conducted, also the methods that were used and the ways to assess the causes, impacts, the methods of resolving conflict, the benefits of conflict resolution and the factors influencing conflict management among construction professionals all formed part of the research.

1.12.1 RESEARCH APPROACH AND DESIGN

This study used a quantitative research approach. Burns and Grove (1993: 777) describe quantitative research as an official, objective, logical process to illustrate analysis relationships and observe causes and impacts of relationship among variables. A descriptive survey was chosen in this study, since it offers an appropriate account of the personality. Also, a well-structured questionnaire was designed. The questionnaires were administered to the respondents who are professionals in the Nigerian construction industry.

1.12.2 RESEARCH AREA

The construction industry comprises various construction professionals who are working collectively to accomplish a common goal. This study was carried out in Ondo state and Lagos state i.e. the south western zone of Nigeria. However, South-West (SW) in Nigeria is one of the six geopolitical zones. Lagos state has it is capital in Ikeja. Lagos state is the nation largest urban area in Nigeria. It is a major financial centre and there are many construction companies in Lagos state. Ondo state has its capital situated at Akure, in the tropical rainforest zone in Nigeria. Construction professionals who are working in governments ministries and privately owned firms were targeted.

1.12.3 TARGETED POPULATION

According to Burns and Grove (1993: 779), a population refers to the overall people that contain a particular personality and are of concern to the researchers in meeting the standard for inclusion in the study. The population for this study comprises quantity surveyors, architects,
civil engineers, construction managers, and builders within Ondo state and Lagos state in the western part of Nigeria.

1.12.4 SAMPLE AND DATA COLLECTION

There are two main groups of sampling methods, namely probability sampling and purposive random sampling (Teddlie & Yu, 2007:77). This research study made use of random sampling. The reason is that random sampling provides all the respondents the same opportunity to be chosen for the study with an equal criteria; this encouraged this study to use this method. The criterion for inclusion in this study was being a construction professional in the Nigerian construction industry. Frequently, this method is adopted when the target populations present the same characteristics or the sampling size is too large to represent the whole population proficiently. Each member of the whole population has the same chance of being selected as a sampling respondent.

1.12.5 DATA ANALYSIS

The questionnaires were analyzed using basic descriptive statistics and exploratory factor analysis. The respondents’ responses were grouped based on the categories of questionnaire sections. This study used the Statistical Package for the Social Sciences (SPSS) software to analyze the data collected from the respondents.

1.12.6 ETHICAL CONSIDERATION

According to Homan (1991:148), ethical consideration in this research study is vital in ensuring the integrity of the researcher. The ethical consideration in this study is to acknowledge the professionals in the industry who have contributed to the literature and whose work has been cited in this study. The response of the respondents was strictly confidential and used for academic purposes. The respondents were assured that there will not be any risks or cost involved in participating in this study. The confidentiality was maintained in this study by keeping the data that was collected confidential. No additional information was included in the questionnaire and the questionnaires were only numbered after data had been collected. Also, the attached questionnaire has a typed cover letter of authorization for conducting the research.
study which was granted from the Department of Construction management, Dornfontein Campus, University of Johannesburg.

1.13 OVERVIEW OF CHAPTERS
CHAPTER 1: Introduction

This chapter focuses on the background of the study, aim of study, significance of study, problem statement, research questions, research objectives, motivation for study, purpose of study, delimitation, limitation, and ethical considerations.

CHAPTER 2: An overview of conflict management among construction professionals

This chapter reviews literature on the overview of the construction industry, construction professionals, conflict and conflict management in the construction industry, types of conflict, stages of conflict, factors that cause conflict, impacts of construction professional conflict on performance, the methods of resolving conflict, and the factors influencing conflict management among construction professionals.

CHAPTER 3: Conflict management among construction professionals in South Africa and Ghana

This chapter presents an overview of two Africa countries, namely South Africa and Ghana. The nature of construction industry (CI) in both countries is discussed in this chapter. The particular chapter gives the reader an understanding of the various factors that cause conflict among construction professionals, the impacts of construction professionals’ conflict on performance, methods of resolving conflict among construction professionals, benefits of conflict resolution among construction professionals, and factors influencing construction professionals in both the South African and Ghanaian construction industry. Unrelated views of scholars and researchers on the study are also reviewed.

CHAPTER 4: Conflict management among construction professionals in Canada and China

This chapter presents a theoretical overview of both Canada and China as international countries. This chapter also discusses the nature of both the Canadian and Chinese construction industry. This chapter also reviews literature on factors that cause conflict among construction
professionals, impacts of construction professionals’ conflict on performance, methods of resolving conflict among construction professionals, benefits of conflict resolution among the construction professionals, and factors influencing conflict management among professionals in the Canadian and Chinese construction industry. Unrelated views of scholars and researchers on the study are also reviewed.

CHAPTER 5: Overview of conflict management among construction professionals in Nigeria

This chapter presents a theoretical overview of Nigeria as a country, and the nature of the Nigerian construction industry. This chapter gives the readers an understanding of various factors that cause conflicts among construction professionals in Nigeria and the impacts of construction professionals’ conflict on performance in the Nigeria. This chapter also reviews literature on the methods of resolving conflict among construction professionals, the benefits of conflict resolution among construction professionals and factors influencing conflict management among professionals in the Nigerian construction industry. In addition, unrelated opinions of scholars and researchers on the study are reviewed.

CHAPTER 6: Research methodology

This chapter focuses on the research approach and design that the study adopted in order to obtain accurate data. This chapter explains the rationale for the study, the research approach and design, the research area, the pilot study, the target population, samples, and data collection and data analysis.

CHAPTER 7: Findings and analysis

In this chapter, the statistical analysis that was used for this research, namely the mean item score and exploratory factor analysis (EFA) is explained. The EFA was used to check the reliability and validity of the various factors that cause conflict among construction professionals, the impact of professionals’ conflict on performance, methods of resolving conflict among construction professionals, benefits of conflict resolution among construction professionals and factors influencing conflict management among construction professionals in Nigeria. The
analysed results provide the response with respect to the research topic and research questions. The interpretation of data collected is done in this chapter.

CHAPTER 8: Discussion of findings

This chapter discusses the findings which are analysed and relate them to the literature review so as to establish whether the research objectives have been achieved.

CHAPTER 9: Conclusions and recommendations

This chapter finally concludes the study and gives recommendations on conflict management among construction professionals in Nigeria.

1.14 CONCLUSION

In this chapter, the basis of the research study was introduced such as the background of the study, research aims, the significance of study, the problem statement, the research questions, the research objectives, the motivation for this study, the purpose of study, the delimitation, and limitation of study and the research methodology used in accomplishing the research objectives.
CHAPTER TWO

AN OVERVIEW OF CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS

2.0 INTRODUCTION
This chapter focuses on related study and theoretical rationale, including research questions, and the perspectives in the contents of previous research and current discussions. The chapter reviews literature on the nature of the construction industry, construction professionals, conflict and conflict management in the construction industry, types of conflict, stages of conflicts, factors that cause conflict, impacts of construction professionals’ conflict on performance, methods of resolving conflict, benefits of conflict resolution among construction professionals, and factors influencing conflict management.

2.1 NATURE OF CONSTRUCTION INDUSTRY
The construction industry is a vital part of any economy owing to its capacity as well as the potential role it can play in growing the economy. The construction industry is regularly referred to as an indicator of socio-economic improvement of a country and therefore it is essential in the procedure of growth (Narh, Owusu, Oduro-Apeatu, and Narh, 2015:44). Apart from the industry potential in the area of employment creation, a variety of actions performed in the construction sector are extremely significant to the development of high-quality industrial relationships and enhancement, as well as supporting financial growth. The construction industry has the duty of ensuring good development through the creation of employment opportunities and good infrastructure (Omole and Hillebrandt, 2000).

Construction is a miscellaneous industry that is directly connected with the economy generally. In fact, several of the key United States (US) economic indicators are obtained merely from the construction industry. The industry is impacted by world events as well as trends. The construction sector is indisputably connected to the development of the economy and society in general. Almost everyone in modern mainstream society upholds a mutual relationship with the built environment. In fact, “Americans spend on average 90% of their time indoors” (Cory, 2009:1).

Construction contributes about 7% of a nation’s gross domestic product (GDP) while in some industrialized nations like Japan the sector contributes about 12 to 14% (Gann, 2000). The
emerging countries savings in construction tasks might be as high as 50 to 60% of the nationwide financial plan. In Nigeria, the construction industry was the prominent provider to the country gross domestic product in the 1980s, comprising about 70% of the gross domestic product. This made construction industry essential to Nigeria’s development efforts (Oladapo, 2007). The industry comprises a structured formal sector as well as an unstructured informal sector. The formal sector comprises of foreign as well as indigenous firms that are categorized into small, medium and large scale based on their stage of capitalization as well as their yearly income. The small, large firms (commonly foreign), which consists about 5% of the entire figure of contractors in the formal sector, accounting roughly 95% of the construction market, providing the small firms with almost a 5% share of the market (Oladapo, 2007:261).

The construction sectors in Africa had, for three decades, encouraged the nations to minimize their dependence on foreign materials as well as improving the use of indigenous materials. The foremost challenges emphasized were the issues that are regularly overlooked in materials programmes which include socio-cultural with past issues that delay the implementation of the materials. These comprise the lack of proficiency to position the construction materials, the high amount and inadequate superiority of the materials manufactured and the absence of efficient delivery that have discouraged the growth, production, dissemination and utilization of indigenous materials in Ghana (Ofori, 2015:118).

2.2 THE OVERVIEW OF CONFLICT AND CONFLICT MANAGEMENT
According to Schramm (2002), conflict is a serious misunderstanding and argument on something considered to be important among the professionals involved. Conflict is a combination of misunderstanding, negative feelings and interference among professionals in the construction industry (Bodtker, Kertz and James, 2001). Moreover, conflict is a state of opposition between professionals over beliefs, ideas, and behaviours in the construction industry. Therefore, any circumstance that leads to opposing views in an organization is referred as conflict (Stanlous, 2000: 5). Okoho (2005) also acknowledges conflict as a situation caused by differences in ideas. The misunderstanding can lead to interruptions in the interactions of the construction professionals. This usually occurs among professionals (Okoho, 2005: 92). Mullins (2005) states that conflict disrupt the accomplishment of other professionals’ goals. Conflicts arise from different ideas and goals from opposing parties. The necessary scenery of conflict
situations is easily unspecified in expressions of the difficulty concerned in gathering everyone’s ambition individually (Rubin & Sung, 2004). A study by Schramm (2002) describes conflict as a misunderstanding and fight about an issue considered to be essential by professionals in the construction industry (CI).

Conflicts are problematic to avoid but the indications of conflicts can be identified so as to manage conflict whenever it arises. Therefore, it is essential for professionals to control the indications signifying the occurrence of conflict. If the construction professionals do not react quickly to the initial indications of conflicts, then it is likely that there will be a time when the construction industry is disrupted by conflict. Conflicts commonly arise where construction professionals’ tasks rely on team work as well as the group resourcefulness of professionals, yet the emphasis is mainly on achieving outcomes instead of looking after the professionals and upholding a mutual relationship among professionals (Khan, Hussainy and Igbai, 2016:153).

It can be perceived on the basis of individual construction professionals at a group organizational level that sometimes conflict has negative consequences for groups. However, it can also act as an inspiring as well as an encouraging factor for professionals (Olu et al, 2008). It depends on the nature of the professional organization and the cause of the workplace conflict. It can be constructive and have benefits for construction professionals.

McClinton (2014) describes conflict as a dissimilarity in opinions or perspectives that may lead to a fight for position. Conflict can transpire in any situation and as professionals in the construction industry monitor and adjust their groups, they are likewise confronted through managing conflicts that occur both interpersonally and within the groups. According to Doucet, Poitras, and Chenevert (2009), the nature of conflict is normally associated with a concern or task. A conflict that is interest-related is refers to as interpersonal or group difference in goal while a task conflict means a conflict allied to the approaches, or approaches involved in achieving the goal. Raeve et al (2008) and Montes et al (2012) state that when describing conflict, the misunderstanding which results to the conflict is readily observed because of an interference with the accomplishment of a goal.

According to Helliriegel (2010), conflict management is a system to reduce conflicts. This means conflict management is the method of minimizing conflicts among construction professionals (CPs) so as to intensify efficiency in the construction industry. According to Asawo (2011),
conflict management can be described as an affirmative as well as active approach to managing differences and misunderstanding. Verma (1998) states that appropriate conflict management comprises three important stages. The first stage is getting ready for the conflict by anticipating the conflict as well as preparing to experience the conflict. The second stage is confronting the conflict by knowing its actual nature, and the third stage is handling the conflict based on the strategy with required transformation. Hence, it is highly significant to identify and comprehend the conflict before starting the management. The capability to manage conflict seems to be essential to constructive interactions, active teams as well as significant professionals’ leadership. Shetach (2012) speculates that conflict management has been a vital element of human society as well as the effective management of conflict circumstances has resolute the results in human existence currently. Though the body of literature gives numerous purposes concerning the management of conflict, researchers vary in their viewpoints as to why management is necessary (Giacomantonio, Pierro and Kruglanski, 2011). Longe (2015:85) notes that as conflict is unavoidable in organizations, its management decides whether it will produce a constructive or destructive outcome on the professionals’ organization performance. The appropriate acknowledgement and instant clarification of the fundamental pressure before the conflict circumstances gets out of hand are beneficial to the effective management of conflict in the construction industry. Therefore, conflict management orientation is an essential procedure which can be applied in different conducts in the construction industry.

It is understood that well-managed conflict among construction professionals will improve their dedication to their organization as well as affirm their remaining in the organization while unsettled conflict among professionals will heighten their intention to leave the organization. Ahmad and Marinah (2013) opine that the integrating style or collaborating style in managing conflict plays a foremost role in increasing concern towards the organization. Nik and Sharmin (2002) note that there is less conflict when the integrating style of resolution is adopted in the organization. The integrating style is said to be one of the major methods to improve obligation among professionals for the reason that this style emphases problem solving through a collaborative manner. Professionals that make use of integrating style confront conflict immediately and attempt to discover innovative and inspired solutions to the challenges by concentrating on their own desires and the desires of others (Havenga & Visagie, 2011). A compromising approach can increase commitment among professionals as it inspires the
professionals to work collectively in order to manage conflict among them. The compromising approach is described as when professionals are eager to give in to some demands in return for concessions from others (Dobkin & Pace, 2006). However, this compromising method refers to both professionals working with full commitment with one another and they are not selfish in negotiation as well as showing concern.

The conflict management procedure comprises a general diversity of undertakings containing communication, solving of problems, dealing with feelings, as well as understanding positions (Brett, 2001). Conflict management strategies have mostly been considered either as individual styles that are reflective of the personalities of individuals, such as types of behaviour such as intimidation, or as comprehensive behavioral orientation such as avoiding, accommodating, compromising, competing, and problem solving (Folger, Poole, and Stutman, 2001). Previous research has presented that various conflict management approaches such as collaborating, competing, and accommodating assist in accomplishment at both the individual and organisational levels. Take for instance; collaborative methods enhance efficiency in handling conflict (De Dreu, 2006; Tjosvold et al, 2003).

2.3 THEORIES OF CONFLICT
Usoro, Ekpenkyong and Effiong (2014: 139-140) identify the theories of conflict as the traditional view, the human relation view, the interactionist view and the perspective view theory.

2.3.1 The traditional view theory
The earlier method to conflict presumed most conflicts remained destructive. Conflict was observed as harmful, and it was used in the same way with some expressions such as aggression, damage and unreasonableness to emphasize its undesirable implication. This theory states that conflict is destructive and ought to be shunned. The traditional view of conflict was in line with the behaviour that was typical of professional organization behaviour in the 1930s as well as 1940s. Conflict was referred to as a destructive effect arising from inadequate communication, and a lack of honesty and reliance among professionals (Robbins & Judge, 2010).
2.3.2 The human relations view theory

This theory contends that conflict is a common happening among professionals and it is unavoidable. Advocates support the recognition of conflict. This view dominated conflict theory from the 1940s through the middle of the 1970s. Advocates rationalized its occurrence; it cannot be eradicated, and there are incidents when conflict can lead to progress and the improvement of professionals’ organizations.

2.3.3 The interactionist view theory

The interactionist theory regards conflict in a way that is pleasant, non-violent, and calm. In addition, a cooperative group of professionals is likely to become interested in and responsive to the need for transformation and revolution (Dreu & Vliert, 1997 in Robbins & Judge, 2010). The foremost impacts of the interactionist therefore are motivating professionals to uphold a current lower level of conflict.

2.3.4 Perspective view theory

The construction professionals view the relationship among themselves from a range of different perspectives:

2.3.4.1 Unitary perspective theory

According to this theory, every construction professional’s work collectively as a team helps to accomplish mutual ambitions. The unitary approach to leadership relations accepts that construction professionals work collectively to accomplish mutual ambitions. This theory acknowledges the economic entity as incorporated body whereby every construction professional shares the same ambitions. If conflict occurs, it is refers to as a lack of professional leadership or inadequate communication.

2.3.4.2 Pluralist perspective theory

The pluralist trusts that conflict among professionals, given their diverse interests, is anticipated at times. It likewise identifies that some interests are mutual and that organizational policy decision making ought to be shared among the contending construction professionals. Therefore professionals must devise an active method of communication which decides the individual professionals to express their opinions as well as to handle any conflict.
**2.3.4.3 Radical perspective theory**

This method trusts that there are essential dissimilarities among construction professionals and that it is virtually sure that conflict would frequently arise. It trusts that professionals are too divergent to work collectively (Usoro et al, 2014:140).

**2.4 TYPES OF CONFLICT**

Based on the literature review, numerous types and levels of conflicts among professionals can be recognized. Aswathappa and Reddy (2008) also recognized a classification for types of conflicts as intra-individual, interpersonal conflict, inter group conflict, and intra-groups conflicts.

**2.4.1 Intrapersonal conflict**

Rahim (2001) states that intrapersonal conflict occurs when an individual professional is unable to carry out responsibilities which do not compatible with his or her proficiency and capability. Interpersonal conflicts occurs between two professionals in the same construction industry. Barki and Hartwick (2001) researched levels of interpersonal conflict in conflicting issues. In an organization where participants are engaged to work in teams, there is no way misunderstanding will not arise between the participants in the organization.

**2.4.2. Interpersonal conflict**

This means conflict among professionals of similar or diverse levels. This refers to a conflict between two individual professionals in the construction industry. Jamesson (1999) views interpersonal conflict as a situation which occurs when two or more construction professionals in a particular organization have difference ideas, belief and goals. This is a problem which limits their capacity to work together. This usually occurs owing to how the professionals are dissimilar from each other. Naicker (2003) states that interpersonal conflict occurs between more or two construction professionals.

**2.4.3 Intragroup conflicts**

Intragroup conflicts are referred to as conflict among two sub-groups of professionals in the same organisation. It can also be called interdepartmental conflict. Intragroup conflict means
conflict which arises within a construction professional’s organization, between departments (Anwar et al., 2012). Jehn and Mannix (2001) and De Dreu and Weingart (2003) further recognized three categories of intragroup conflict, namely task conflict, relationship conflict and process conflict. According to Jehn and Chatman (2000), task conflict refers to disagreements of perception in respect of the task of the professional team. However, task conflict can be referred to as ideas regarding the comfort and problems of the tasks. Riaz and Junaid (2014) considered other terms for task conflicts, namely cognitive conflict and substantive conflicts, while relationship conflict can also be called affective conflict and emotional conflict (Riaz & Junaid, 2014). Relationship conflicts are the awareness of individual professionals about the incompatibilities which involve individual’s emotion (Jehn & Mannix, 2001). Additionally, the intragroup conflict can be process conflict. Process conflict is refers to as consciousness of disagreements about phases of how task achievement will proceed (Jehn & Mannix, 2001). Jehn and Mannix (2001) further state that process conflicts can transpire because of challenges of duty as well as resource allocation among construction professionals.

2.4.4 Intergroup conflict

Intergroup conflict is the conflict between two departments or two professionals’ managerial units in a particular organization (Rahim, 2001). Intergroup conflict can also be called interdepartmental conflict. Thakore (2013:9) states that intergroup conflict arises among members of different professional groups which can also have substantive and emotional bases. He further states that intergroup conflict is fairly common in organizations, and it can make the management as well as the integration of task activities very difficult.

2.4.5 Inter-organizational conflict

Inter-organizational conflict means conflict between two differing professional organizations (Rahim, 2001). According to Thakore (2013:9), conflict that arises between two or more organisation is referred as interorganisational conflict. Organizational conflict involves interpersonal conflicts with intergroup conflicts within different segments of an organization. There are two kinds of conflict in organizations: vertical and horizontal. The vertical conflict transpires in clusters of various hierarchical levels, while horizontal conflict arises between entities of the same level.
2.5 FACTORS THAT CAUSE CONFLICT AMONG THE CONSTRUCTION PROFESSIONALS

A study conducted in Zimbabwe on organisational conflict by Tshuma, Ndlovu and Bhebte (2016:13) revealed some major causes of conflict such as poor working conditions, differences in personalities, poor dissemination of information, and favouritism at work. The study recommended that people should be equipped with conflict resolution skills in order to minimize conflict and subsequently manage conflict. The study also recommended the establishment of conflict resolution committees for improving employees’ working conditions to reduce the rate of organisational conflict.

Kipyego (2013) identifies major factors that usually cause conflict such as unimpressive working conditions, indiscipline, inappropriate administrative styles, inadequate resources, role ambiguity, and differences in values. The study recommended that conflict resolution should be established so as to minimize conflict occurrences in an organisation. Jodhi and Apitree (2012) also revealed differences in goals and views, differences in personalities, inappropriate administrative styles, role ambiguity, interdependency, and inadequate communication as major conflict factors. The differences in goals and views could be caused by varied experiences, opinions, incompatible goals, and political influence.

Nach (2008) reveals some foremost causes of conflict such as inadequate communication, poor task management, unfair workplace, bad behaviour, selfish attitudes, diverse values and irresponsibility. Conflict is the circumstance which gives rise to differences among the interdependent professionals when they try for the accomplishing their purposes and goals as well as their needs. The divergence in views of the professionals and differences in cultural orientations among construction professionals could results in conflicts. Conflict occurs owing to struggles among professionals when they want to achieve their purposes, to act according to their own opinions or to achieve their own needs (Mayor, 2000).

Eidelson and Eidelson (2003) identified some major causes of conflict such as goals differences, differences in perceptions, divergent views about standards, role ambiguity, inappropriate exchange of ideas, poor decision making, nature of work, hostile attitudes of professionals and organizational working conditions. However, Anger and disagreement based on non-accomplishment of goals cause conflicts and sometimes power struggles become a major cause.
of conflict. Sometime the concerned professionals try to control others and show aggression which causes conflict when reaction arises from the other side. Difference in views, aims, and standards usually create rivalry among the individuals and then these divergent views, contradictory interests and different perceptions lead to conflict.


2.5.1 Indiscipline among professionals

Indiscipline among professionals usually causes conflict owing to some professionals who are always disobeying as well as disrespecting others and complain about tasks in the construction industry. Such professionals are regularly absent as well as unreachable and also find it hard to apply discipline with others (Kipyego, 2013). However, Professional’s indiscipline usually occurs in various ways such as usual unpunctuality to work, truancy, and inadequate commitment to work: loitering, refusal to take responsibility. It likewise comprises bribery and dishonesty, tribalism and nepotism, drunkenness, misappropriation of funds.

2.5.2 Differences in professionals goals and view

This usually occurs when the achievement of goals by one professional prevents the possible accomplishment of goals by others, and then there is a higher possibility of conflict. It can be a problem of opinion. Conflict can emerge if the professionals in the organizations recognise that only one goal may be accomplished and that there is little possibility for the others’ goals to be achieved (Saiti, 2015). Makaye and Ndofirepi (2012:106) also emphasized that conflict can be caused through goal differences. However, goal differences occur when there is inadequate agreement regarding the way of assessing task accomplishment among professionals. Longe (2015) likewise revealed goal incompatibility as one of the prevalent issues that usually cause conflict in the workplace. Every professional has different goals and views about the way tasks are carried out (Johdi & Apitree, 2012).

Moreover, the interests of professionals with different goals frequently clash, particularly when competing for meagre resources as well as targeting to reach positions of power and decision
Circumstances are sometimes affected by divergent opinions among professionals and this also results in conflict (Yambo & Tuitoek, 2014).

2.5.3 Differences in personalities

Professionals come from different upbringings with various experiences, which play a part in determining their personalities. When professionals decline to recognize or admit the diversities in each other's personalities, challenges emerge in the workplace. A professional may have a straightforward personality that leads him to speak whatsoever is on his mind, even if the timing is inappropriate. The professional with an honest personality may upset others that do not have the same type of personality (Isa, 2015:55). Johdi and Apitree (2012) also note that professionals have dissimilar personalities which in some circumstances lead to conflict. Personal differences should allow for diverging viewpoints to be voiced allowing the construction professionals to maintain a comfortable working condition. Heather (2016:6) also agrees that differences in personality are one of the foremost causes of conflict in an organization.

Deutsch (2000) specified that since professionals have diverse personalities, this has frequently resulted in their undertaking things in a different way. These different personalities might generate the possibility for conflict among the professionals concerned. Mondy et al (2010) and Mudis and Yambo (2015) noted that personality dissimilarity can be noted in the way in which people express themselves which may clash with that of other professionals. These professionals have a habit of blaming others for their depressions. Some of the different personality types are persistent, aggressive, bad-tempered, diffident, and extremely demonstrative.

2.5.4 Poor working conditions

Conflict can be caused through professionals’ poor working conditions. Some professionals work in highly demotivating conditions owing to poor salaries, which cannot meet their basic needs. Therefore they might be extremely discouraged and this might certainly lead to conflict. Such conditions are extremely uninspiring and this usually results to conflict among professionals (Okotoni and Okotoni, 2003).
2.5.5 Poor dissemination of information

This usually occurs through poor encoding of messages, poor human relationships among professionals, the inadequate proper information process as well as bad timing. These can be some of the issues that undermine common understanding among professionals and therefore may result in disagreement and conflict in the workplace. Indeed, lack of honesty and a non-approachable strategy to the desires of others cannot withstand constructive discussion and, as a result, may have destructive effects on the communication process (Saiti, 2015).

2.5.6 Inappropriate administrative style of professionals

This usually occurs when some professionals use a dictatorial style of leadership in their administration which makes it problematic for other professionals to openly and honestly voice their opinions and as a result, they hardly ever resolve issues cordially. Also, an irrational anticipation by some construction professionals to manage disciplinary situations and disagreements due to an inappropriate administrative style are a fundamental cause of conflict (Tshuma, Ndlovu and Bhebhe, 2016:88).

2.5.7 Favouritism among professionals

Tshuma, Ndlovu and Bhebhe (2016:35) identified favouritism as one of the factors that can lead to conflict in an organisation. They further stated that favouritism means to prefer one person above others, simply because management likes him or her. However, due to favouritism conflict usually arises among the construction professionals because majority of the professionals are not selected according to agreed criteria. Kipyego (2013:18) noted that professionals sometimes favour themselves at the expense of others, which gives rise to a sense of anger and hatred. It is this anger that usually cause rumours, distrust and conflict in an organization.

2.5.8 Differences in level of education

There are increasingly differences among professionals. Differences in educational qualifications can be a source of conflict (Shahmohamma, 2015). Pressure sometimes occurs due to qualifications as some professionals sometimes prove they are more experienced and capable than their colleagues. Such professionals do not cooperate with others in order to be regarded for positions at a higher level (Johdi & Apitree, 2013; Afful-Broni, 2013).

2.5.9 Change order over task among professionals

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Change orders are frequently issued to cover differences in the scope of professionals’ tasks and these regularly have a serious impact on the quality, time, as well as cost of tasks. Change orders involve appropriate analysis as well as action to examine the reasons and effects of the change orders. It is problematic to manage them, but it is essential to manage change orders among construction professionals. Likewise, change orders concerning tasks can lead to work abandonment which could result in conflict (Desai, Pitroda, and Bhavsar, 2015:152). According to Mitkus and Mitkus (2013:779), change order is one of the main factors that commonly result to conflict. Although change orders among the professionals frequently occur due to various circumstances, it often causes misunderstandings among the professionals which in turn lead to conflict.

2.5.10 Lack of coordination among professionals

Coordination involves a set of two or more professionals in the construction industry to perform tasks collectively so as to achieve goals. Coordination among the professionals is essential and necessary in order to avoid conflict. A situation whereby there is a lack of coordination among construction professionals can cause serious conflict in the construction industry (Chen et al, 2008:71).

2.5.11 Poor decision making of professionals

The decision making among the professionals at different stages has impacts on professionals’ performance in an organization. It increases conflict occurrences and delay of professional works. Poor decision making can lessen the value of professionals’ performance in the organization (Chen et al, 2008:74).

2.5.12 Financial problems of professionals

Some conflict occurrences among the professionals are sometimes a consequence of inadequate financial resources. In some cases, professionals’ organisations are liable for the lack of financial resources to the professionals, resulting in conflict. Professionals frequently blame the organisation for not providing the necessary resources, yet the same organisation is quick to demand good performance (Kipkemboi & Kipruto, 2013). There are financial situations among the professionals which comprise delayed payments, cash flow issues and the like. The problems enumerated here can lead to low productivity and decreased value (Chen et al, 2008:77).
2.5.13 Differences in professionals’ experience

Robbins (2000) opined that conflicts can occur when individual professionals admire personal value systems such as experience. Sometimes the experience diversities make the relationship among professionals difficult for them to work collectively. Usually, some professionals have diverse levels of skills and abilities. Johdi and Apitree (2012) contend that conflict can occur when an experienced professional works with a trainee who has good theoretical understanding but limited practical skills. Experienced long serving professionals who graduated some years ago could possibly have some conflict when working with young graduates who use the most current and new techniques.

According to Aldag and Kuzuhara (2002), Gross and Guerrero (2000) and Yambo (2012), individual conflicts are frequently related with factors such as experience, and training which mould each professional into a distinctive personality with specific opinions. The outcome is professionals who can be observed by others as rough, undependable, strange, or hard to work with. This can lead to conflict. Adenaiya and Adejugbagbe (2017) opined that conflict sometimes occurs through experience diversities. However, the experience of construction professionals counts; the more the professionals work in the industry, the more experience they gain, and experience divergence at times causes conflict.

2.5.14 Role ambiguity

Role ambiguity occurs when a professional does not know precisely what to do; such a professional may be confused regarding work or responsibilities to carry out (Iraj et al, 2013: 1928). Moreover, a certain role is expected to be carried out by professionals; when there is inadequate clarity of the role as well as the job requirements then the professionals encounter an unfamiliar working environment and this might lead to an unanticipated pattern of behaviour (Saiti, 2015). Verbeke et al (2011) opined that role ambiguity is an aspect of any work environment signifying ambiguous and undependable work conditions.

Role ambiguity occurs when the lines of duty among professionals are unclear. Professionals have a propensity to pass undesirable tasks to others when responsibilities are not clearly specified. Ambiguous goals can result in conflict. Under such uncertainty, the formal and
informal regulations that govern communication breakdown. Ambiguous roles regularly surface when new programmes are presented (Omisore & Abiodun, 2014: 127).

2.6 IMPACTS OF CONSTRUCTION PROFESSIONALS’ CONFLICT ON PERFORMANCE

Conflict can have a positive impact when it is managed appropriately and conflict can also have negative impacts when it is not well-managed (Farooq et al, 2015). Both the positive and the negative impacts of construction professionals’ conflict on performance are discussed below.


2.6.1 Conflict creates better trust among professionals

A well-managed conflict among construction professionals usually enhances professionals’ to trust each other in the construction industry. This is when professionals have trust in other professionals in the construction industry, knowing full well that they have the capability to deal with diversities and opportunities. Dickie (2015:3) opined that trust facilitates cooperative relations among professionals.

2.6.2 Conflict improves productivity of professionals

If conflicts are managed well among construction professionals, this can actually improve professionals’ productivity in the construction industry. This is when professionals are capable to state their fear and thoughts to confront dissimilar opinions and most significantly, determine their diversities, which will lead to improved productivity. Kumar et al (2015) stated that productivity is the ratio of output to input of tasks done among the construction professionals.

2.6.3 Conflict enhances creativity among professional

Creativity among construction professionals can only occur when construction professionals manage conflict appropriately based on their experience. According to Yong et al (2014:268), creativity involves combining various perceptions to produce innovative as well as useful solutions. However, construction professionals often depend on interdisciplinary teams to work on tasks which require creativity owing to the fact that teams that are equipped with a miscellaneous pool of understanding, skills, and expertise. Some professionals see conflict as an
opportunity for discovering creative solutions to solve challenges. A well-managed conflict can motivate professionals to brainstorm ideas, while assessing issues from different perceptions (Isa, 2015:57).

2.6.4 Conflict enhances resourceful thinking among the professionals

A well-managed conflict gives rise to resourceful thinking among the professionals. Construction professionals’ benefits of the present day are the result of the organizations’ management of conflict (Omisore & Abiodun, 2014:128).

2.6.5 Conflict helps professionals to share opinions

Construction professionals need to work collectively to resolve conflict and be prepared to share their views with other professionals in the construction industry. Conflict can lead professionals to listen attentively to one another as they work to achieve their objectives (Omisore & Abiodun, 2014:128).

2.6.6 Conflict improves communication among professionals

In a well-managed conflict situation, communication among every professional in the construction industry can be improved and can bring professionals together and facilitate their being taught more concerning each other (Isa, 2015:57). Mapolisa and Tshabalala (2012:3) also agree that conflict can enhance communication as professionals sense they are in a position where they feel they want to state their views; and this frequently results in the setting up of formal channels to confront any upcoming conflict. Therefore, communication is essential in order to enhance professionals’ performance within the construction industry.

2.6.7 Conflict produces ideas for innovation among professionals

A well-managed conflict brings about innovation among construction professionals. Innovation among construction professionals has been described as a planned introduction as well as application of ideas, procedures or methods new to the construction industry, intended to meaningfully benefit individual professionals in the construction industry (Desivilya et al, 2010:29). The perception of innovation highlights the component of thoughtful effort by construction professionals and the application feature which differentiates it from irregular creativity of gifted professionals (Amabile et al; 1996). Conflict can enhance creativity and innovation (Karthikeyan & Manikandan, 2017:1155).
2.6.8 Conflict helps in earlier problem identification

Whenever conflict is being managed appropriately among construction professionals, certainly conflict could stand out as a solution on tougher issues which required to be resolved early. Many apparent differences relating from unresolved problems, if not dealt with, are likely to worsen the construction industry. Gyulay and Yates (2012) stated there are many issues which usually cause conflict among construction professionals.

2.6.9 Conflicts helps in solving professionals’ organization problems

A properly managed conflict can help in finding solutions to any forms of conflict tending to arise among construction professionals. Carson (2007: 7) stated that problems solving is merely one kind of a larger type of thinking skill that professional use among themselves.

2.6.10 Conflict causes job pressure among professionals

If conflicts are not managed well among construction professionals it can create job pressure. Job pressure is a situation which occurs when individual professionals realize that the conditions or stress facing them may be more than they can deal with (Gharib, Jamil, Ahmad and Ghouse, 2016:22). However, the term ‘job pressure’ can be refer external harmful issues among professionals in the construction industry. Job pressure is usually caused by been stressed. There are various ways of responding to stress, so a situation that feels stressful to a professional may be inspiring to others. Stress can affect how a construction professional feels, thinks, and behaves (Isa, 2015:55).

2.6.11 Conflict creates displeasure among professionals

Whenever there is unresolved conflict among construction professionals it usually leads to unhappiness and discomfort among the professionals. Aminu and Marfo (2010:32) opined that the occurrence of construction professionals’ conflicts has become a concern in the construction industry. Certainly, if there is one particular issue undermining professionals’ goals today, it must be conflict.
2.6.12 Conflict reduces communication among professionals

According to Muema (2012), poor communication among professionals in the workplace is a serious issue and can be costly to the professionals in the construction industry. The impact can be overwhelming to the construction professionals involved. Several of the consequences are loss of jobs, goods, services, and a lack of efficiency, as well as damage. Khan et al (2016:162) identified communication breakdown as the most severe impact of conflict because when conflict occurs among professionals in construction, whether they are working in groups or at an individual level, regularity of communication is affected and reduced.

2.6.13 Conflict creates a climate of mistrust among professionals

Unmanaged conflict usually leads to mistrust among construction professionals. Mistrust among construction professionals is a belief that professionals’ values or purposes will lead them to confront all circumstances in an unacceptable manner as an expectation of castigations from other professionals rather than rewards” (McKnight & Chervany, 2001:28).

2.6.14 Conflict leads to abandonment of professionals’ work

Kassab, Hegazy and Hipel (2010) opined that conflict remains an issue with the possibility of leading to task failures, lawsuits as well as total task abandonment among professionals. However, abandonment of professional’s tasks can be caused through various misunderstandings and crises among the professionals, which can lead to poor performance.

2.6.15 Conflict leads to frustrations of professionals in carrying out their task

Frustration among professionals is described as the unanticipated obstruction of an expected goal achievement. Andalib, Darun and Azizan (2010:2) describe frustration as a state of thoughts which results to obstacle that is captured by harmful emotion. However, the occurrence of conflict can affect construction professionals performing their tasks.

2.6.16 Conflict causes work damages among the professionals

Whenever conflict has not been resolved among the construction professionals, it usually leads to professionals’ tasks being compromised. Omisore and Abiodun (2014:13) opined that that conflict might lead to work damage. Unmanaged conflict usually causes damage to construction professionals’ performance in the construction industry.
2.6.17 Conflict affects professionals’ morale

According to a study by Khan et al (2016:162), conflict leads to low morale among professionals. The morale of professionals usually goes down when conflict occurs and which become more unfavourable as well as decreasing their level of motivation. Omisore and Abiodun (2014:129) also agree that conflict affects professionals’ morale which can lead to poor performance in the construction industry.

2.7 METHODS OF RESOLVING CONFLICTS AMONG PROFESSIONALS

Conflict resolution seeks to include professionals in a consensual process as well as enabling them to resolve their differences and comprehend their individual moralities. It also has the concerns among professionals so as to resolve their misunderstandings themselves and not resolving these with a mandatory decision (Stickley, 2002). However, conflict resolution is a techniques grounded on discovering the concern of the professionals and accepting genuine desires without vindicating legal rights. Salami (2009:44) identified conflict resolution methods such as collaborating, avoiding, competing, smoothing, as well as compromising, which are dependent on the area of the win/lose orientation of the professionals involved.

McShane and Von Glinow (2001) presented the dimensions of assertiveness, cooperativeness as well as win-win and win-loss orientation beside the range in discussing each of the five conflict resolution methods. For instance, construction professionals adopting collaborating, smoothing and compromising approaches are expected to show high cooperativeness as well as low assertive attitudes. Likewise they are anticipated to use more win-win and less win-loss orientation attitudes. Construction professionals making use of avoiding and competing approaches are deliberated to show high assertiveness and low cooperativeness attitudes. They are likewise deliberated to use more win-loss than win-win orientation attitudes.

Stanlaus (2011:68) opined that the approach of professionals to the conflict if a collaborating method is embraced should be to create the “best” resolution despite the fact that the opinions of either or both professionals may require to be unwanted. Both professionals must target to look for a win–win circumstance. Ajike, Akinlabi, Magaji and Sonubi (2015:264) stated that one of the five approaches of resolving conflict is through competition, also known as contending. The competition approach is an effort at total victory. It is a win/lose style, a ‘winner occupies all’ spaces. Commonly, the emphasis is on winning the conflict by all means, as a substitute of
looking for the utmost appropriate solution for each professional concerned. They further stated that the second approach of resolving conflict is accommodation, which is contrary to competition. It is a lose/win method. The avoidance is the third method, whereby both conflicting professionals withdraw. The avoidance is refers to as the lose/lose consequence in conflict resolution because neither side is proficient to deal with the challenges or resolve them. The fourth one is refers to as collaboration, which is commonly deliberated as the major technique to handle conflict. Collaboration is also known as a win/win method. It does not need either side to give up their position. Rather, both sides seek innovative and mutual progressive grounds (Ajike et al, 2015:264).

2.7.1 Avoiding

Avoidance is the response toward ineffectiveness or lack of knowledge of an uncomfortable problem by being ambiguous. According to Zhang et al (2015: 458), avoiding is also known as an ignoring style. The researchers stated that avoidance means postponing situations and withdrawing from issues of conflict. However, the suppression of conflict produces little direct interaction with adversaries among the construction professionals. A reduced level of interaction results from a reduced commitment to conflict. Khan et al (2016:162) recognized avoidance as the most ineffective way of resolving conflict. They further demonstrated that whenever conflicts transpire, professionals start to avoid such circumstances and individuals, which can result in conflicts in years to come and they likewise do not make plans to cope with the conflicts. Construction professionals constantly avoid from conflict. They false that everything is satisfactory to an extent that if they are publicly questioned, “Do you have any concerns that you wish to convey?” they frequently say, “No”. Professionals who favour this avoidance approach incline to avoid conflict (Huan & Yazdanifard, 2012:145).

Khaleda and Aleya (2016:2014) opined that avoiding is suitable when a professional thinks it is not the right time for confrontation. It can be appropriate in some situations but not in all. More regularly than not, it is probably healthier to confront the issue before it becomes worse. One must have some skills to apply this method.
2.7.2 Contending

The contending method focuses on achieving a victory, overcoming other professionals through an effort to show how incorrect they are (Jeong, 2008:31). According to Copley (2008:7) contending style has high concern for oneself, which is considered by a desire to exploit individual achievement, even at the expense of others. This contending method is different from the collaborating method, which ensures solutions to conflict meet the desires of all professionals involved. According to Barmao (2013), the contending style is valuable as well as reasonable when a rapid action is necessary during occurrences such as an emergency as well as life-threatening circumstances and when a decision has to be made quickly. This style can be beneficial when an unpopular solution must be useful.

2.7.3 Accommodating

Accommodating styles are more observable when professionals search for shared interests in finding options that fulfill mutual goals. Helms and Oliver (2015) says that accommodation is the yielding of a component to the force of conflicting professionals. Integrative bargaining strategies can be pursued when every construction professional recognizes that their interdependence is mutually beneficial. Khan et al (2016:162-163) identified accommodating as the second top method used in resolving conflict in an organization because professionals are more likely to adapt themselves to the existing condition without extra confrontation in order to resolve it initially. Accommodating can also be called smoothing method of conflict resolution. It regularly focuses to settle conflicts by considering the desires of others instead of resolving the conflict challenges themselves (Mayer, 2000).

The accommodation method involves dealing with the challenges with an element of unselfishness; an individual professional sets away his own concerns to uphold peace in the circumstances. Some professionals use the accommodating approach when the problem is of little significance to them. There needs to be a balance between integration and accommodation and also between an individual professional and the situation for the accommodation procedure. A sufficient amount of accommodation or smoothing is frequently essential to meet and adapt to new situations. Accommodation might bring an immediate solution to a prevailing conflict (Khaleda & Aleya, 2016:2014).
2.7.4 Negotiating

Christobal (2015:45) refers to negotiation as a method of decision making in order to avoid conflicts. It is communication is a direct approach and official among the construction professionals (CP) who are keen on an agreement for shared benefit. It is a relationship which creates discussion among construction professionals with the goal of attaining an agreement in the construction industry. In negotiation professionals engage in direct discussion as well as consultation to settle the conflicting challenges (Chan & Suen, 2005). Commonly, negotiation is one of the major ways of solving conflict and it is usually chosen because it gives the opportunity for a non-violent settlement to the conflict. In fact, negotiation enhances construction professionals’ working relationship and likewise develops the bonding among construction professionals. An additional advantage of using negotiation is that it is less costly and does not comprise any official proceedings compared to other approaches of conflict resolution (Osei-Kyei et al, 2018:2)

2.7.5 Mediating

Mediation concerns a confidential procedure whereby a neutral third party helps others to discuss a complex situation and negotiate an agreement with them (Anyanwu et al, 2017: 42). A study by Cheung and Yiu (2007) described mediation as one of the major methods of resolving conflict. A study by Heather (2016) stated that mediation has appeared in the past years as an active method of resolving conflict that is caused by “relationship-based conflict”. The engagement of external professionals may assist in mediating among the affected professionals in resolving conflict (Teague & Roche 2012). Lipsky, Seeber and Fincher (2003) emphasized that mediation comprises the usage of an unbiased third party (i.e. the mediator) to act as an organizer of settlement negotiations. Different from an arbitrator, a mediator does not resolve the disagreement, but controls the discussions and assists the parties attain their individual settlement. In a distinctive mediation, the parties individually partake in cooperative meetings as well as in private groups that the mediator embraces with every party and its lawyer. Mediation provides improved flexibility when organizing settlement outcomes. More significantly, the privacy of the proceedings opposes the concern for precedent-setting settlements; thus the parties are allowed to follow choices that best suit the circumstances of the individual case (Cooper et al., 2005).
2.7.6 Arbitrating

Arbitration is the method of resolving conflict comprising a third neutral party, called an arbitrator, after the evidence has been reviewed and attention has been given to the contention from both professionals, and a decision to resolve the case is being made (Anyanwu et al, 2017: 42). According to Gulghane and Khandve (2015:2), arbitration is a form of resolving conflict and it is therefore a pre-requisite for arbitration to proceed that the professionals must agree to refer their conflict to an arbitrator. Such consent is known to be an arbitration agreement. The arbitration can either be oral or written. In arbitration, the conflicting construction professionals do not work towards a commonly settled resolution but fairly present their cases, whereby a final decision is delivered by the arbitrator. The concluding decision by the arbitrator is lawfully obligatory and must be complied by both professionals (Marques, 2018). Several nations have laws as well as principles governing the usage of arbitration and these laws might differ. One of the main benefits of arbitration is that it permits conflicts to be settled confidentially (Chan & Suen, 2005).

2.7.7 Mediating–Arbitrating

It is a hybrid which brings together both of the above, namely both mediation and arbitration. Pertaining to this, the conflicting professionals accept to try mediation first in the construction industry, but offer the neutral construction professionals the opportunity to make a decision in case mediation among the professionals is not successful (Anyanwu et al, 2017: 42). A major benefit of this combination of mediation and arbitration is that it offers construction professionals not just the chance to organize and legalize their individual resolution, but likewise the assurance that if the construction professionals do not concur to a settlement in mediation, their conflict will be settled in a concluding as well as binding award. Also, the procedures can be completely detached and conducted by the various neutral parties, but adopting the same neutral person is an excellent manner for parties to minimize costs (Deason, 2013:219).

2.7.8 Early neutral evaluating

This allows the use of court-appointed attorney in order to evaluate a misunderstanding among professionals in the construction industry ahead of the trial stage. The attorney reviews the facts
of the case among the construction professionals and advises the professionals to attempt resolution (Anyanwu et al, 2017:42).

2.7.9 Collaborating

Collaboration is an approach of conflict resolution whereby a professional attempts to work collectively with the others. Mbaya, Kiplagat and Ernest (2015:204) refer to it as a constructive collaboration. Crystal (2007) emphasizes that this collaboration method shows professionals’ preferences as well as limitations, and engages every construction professional in constructing solutions. According to Tsuma and Ndlovu (2016:85), collaborating is one of the major ways of resolving conflict and requires courage and much attention. The benefit of using this collaborating style is to make all professionals satisfied with an absolute decision (Montoya-Weiss et al, 2001). Also, owing to allowing all construction professionals to be satisfied with the final decision, it more extensive time and effort are required than other method of conflict resolution.

2.8 BENEFITS OF CONFLICT RESOLUTION AMONG CONSTRUCTION PROFESSIONALS

There are many benefits which construction professionals usually enjoy from conflict resolution in construction. According to Stefan (2017), the following are the major benefits of conflict resolution:

2.8.1 Conflict resolution builds relationships among professionals

The resolution of conflict permits for changes to take place. If troubles and differences are ignored slightly than being determined beneficially, things will be better among construction professionals; either thing stays the same, or they become worse. However, when construction professionals talk about their varieties and effort cooperatively, the period is set to be of good transformation to take place. It can be easier in the little term to abscond things as they are great effort to assist every construction professionals concerned in the disagreement to work in the course of the difficulty as increasing better relationships among the professionals (Stefan, 2017).

2.8.2 Conflict resolution leads to professionals’ achieving their ambitions/goals
Conflict resolution (CR) can ensure goal accomplishment among the construction professionals. As they work through conflicts, they make progress in the direction of accomplishing their goals in the construction industry. This is appropriate in expressions of each professional’s ambition of becoming more united with their conflict partner (Stefan, 2017).

2.8.3 Conflict resolution enhances commitment to work among professionals

Conflict resolution enhances the commitment among the construction professionals in conflict. According to Kessler (2013:527), commitment among professionals is a universal term, referring to construction professionals’ logic of attachment and loyalty to the work group with which the professional is involved. Working through the conflict with other construction professionals brings together the conflicting associates as they confront troubles as well as agree on issues together.

2.8.4 Conflict resolution generates new insight/perceptions

It can guide new approaches. If construction professionals (CP) were always in agreement, there would be no reason for new methods to resolve issues. But when construction professionals contribute their individual distinctive view and thoughts, they offer other professionals a chance to look at issues in a different light. It enables every construction professional to imagine other viewpoints and opinions. Though, the opinions or perceptions frequently come from conflict, with inspired analysis that conflict resolution needs to attain in finding a resolution in the construction industry (Stefan, 2017).

2.8.5 Conflict resolution builds team cohesion (teamwork)

Conflict resolution builds construction professionals’ cohesion on common goals to achieve results. Fredley (2005:96) states that cohesion is the level of attraction professionals feel toward one another in the construction industry. Team spirit contributes effectively to construction professionals’ cohesion, improved motivation and general improvement in the atmosphere at work.

2.8.6 Conflict resolution restructures policies and procedures

Conflict resolution helps to organize a well-functioning coordination which depends on professionals’ teamwork. It improves policies and procedures to provide orientation, guidance
and track the performance of the professionals involved. Conflict resolution creates a foundation for policy improvement and procedures’ harmonization.

2.9 FACTORS INFLUENCING CONFLICT MANAGEMENT CONSTRUCTION PROFESSIONALS

Effective conflict management comprises significant changes in minimizing destructive conflict among construction professionals. There are many factors which usually influence conflict management. According to Toku (2014) and Rahim (2002), the major factors influencing conflict management are the following:

2.9.1 Poor leadership style of professionals

Nanjundeswaras (2014:57) describes leadership as a common authority procedure whereby the construction professionals seeks for participating members through an attempt to reach the organization goals. Leadership could influence conflict management (CM) among the construction professionals. Several construction professionals may have leaders with exacting leadership styles that may motivate or demotivate conflict management in the construction industry (Toku, 2014:23). Choosing a leadership style that is not suitable for an exacting conflict situation may be compared to putting a square peg in a round hole. The most suitable style of leadership to be used could be determined after proper enquiry has been effectively done (Cronin & Weingart, 2009).

2.9.2 Culture barriers among the professionals

Conflict management among construction professionals is mostly influenced by a culture that encourages honesty and sharing of useful information; a type of learning where incentive is preferred instead of enhancing voluntary learning through resilient support (Toku, 2014:23). According to Fleury (2009:3), in the construction industry, professionals with dissimilar values may learn similar practices in order to achieve certain benefits. However, in situations where the kind of culture discourages professionals from challenging the status quo, professionals may not fully assist in the conflict management procedure and they would keep their opinions to themselves.

2.9.3 Inappropriate professional organizational structure

Organizations may have structures which may be smooth in nature. One structure could be said to be good or bad but its suitability would depend on the situation involving the construction
professionals. According to Rahim (2002), the structure of an organization includes the hierarchy, procedures, reward systems and many others. However, alteration of the structure of the construction professional’s organization may be good or it may have a destructive influence on the conflict management performance. It was also suggested that the suitability of any structure would be based on the organizational environment of the professionals. Nwonu (2017:190) described an organization structure as the scope of behaviour within an organization; it is line of authority, accountability and to some extent, the organization relationship with its external environment.

2.9.4 Inappropriate professional organizational policies and procedures

The policies of an organization have an imperative influence on the conflict management practices among construction professionals. Some strategies in the organization may influence the practices positively or negatively. Some of the policies which have a good influence on conflict management include policies that are flexible enough and allow employees to partake effectively in the conflict management process. Organizational policies that may control conflict management negatively include strict rules that do not permit professionals to articulate themselves and participate actively in the conflict management process (Euwema, Van de Vlient and Bakker, 2007).

2.9.5 Time pressure

Conflict management can be affected by time pressure as well as the venue chosen by the construction professionals in resolving conflict (Toku 2014:26). If the time and venue are not appropriate for resolving conflict, the expected outcome may not be accomplished (VanSant, 2003). However, a calm environment and a time when all tempers are calm are suitable in order to achieve a good solution from both professionals and generally achieve a successful outcome in the construction industry.

2.9.6 Threatening behaviour among professionals

This is a situation whereby construction professionals intimidate one another which may lead to reduced performance of the professionals in the carrying out of their tasks. Threats emerge if the construction professionals in the construction industry engage innovative graduates and place them in management since their capability to exchange a few words in some local dialect based
on their understanding; these measures lead to some of the bosses such as professionals feeling unconfident.

2.9.7 A lack of trust between professionals

A lack of trust among professionals regularly creates a situation where every transaction has to be examined and confirmed (Kwon, 2004:5). Therefore, whenever professionals in construction industry are not trustworthy, it usually influences conflict management among the professionals.

2.9.8 Rudeness amongst the professionals

Rudeness has negative effects on construction professionals. Doshy and Wang (2014: 30) refers to incivility and rudeness as progressively increasing which cause setbacks of tasks in the workplace. It presents as consequences of time wastage in discussions, smoking at the workplace, and which leads to destruction owing to professional’s misconduct in the construction industry.

2.9.9 Financial problems of the professionals

The limitations in resources among construction professionals could be seen as an inconvenience in an undesirable situation in most parts of the construction industry; a shortage of funds. However, financial issues of professionals are a serious situation which commonly influence conflict management. According to Kipyego (2013:18), lack of finances makes it difficult for the professionals to carry on with their responsibilities. He specifies that professionals have been required to make ends meet in their organisation where there are financial challenges.

2.10 LESSON LEARNT

From the literature review, it was revealed that differences in personalities, favouritism, differences in experience, difference in opinions, incompatible goals, role ambiguity, and indiscipline among professionals are the major causes of conflict. It was learnt that role ambiguity occurs when a person does not recognize precisely what to do; such a person may be confused regarding work or responsibilities to carry out. From the literature, it was identified that conflict also occurs due to favouritism among professionals. Favouritism simply means to prefer one person above others just because management likes him or her. Due to favouritism, conflict usually occurs among the construction professionals because most of the professionals are not chosen based on the agreed criteria.
It was likewise revealed from the literature that a well-managed conflict situation improves communication among every professional in the construction industry and can bring professionals together and facilitate them to be taught more concerning each other. Therefore, communication is essential in order to enhance professionals’ performance within the construction industry. But if conflict is not well managed, it can reduce communication among professionals. Unmanaged conflict affects professionals’ morale. The morale of construction professionals usually decreases when conflict occurs and as well as decreasing their level of motivation.

It was learnt that well-managed conflict improves creativity among professionals. Creativity involves various perceptions to produce innovative as well as useful solutions. However, construction professionals often depend on interdisciplinary teams to work on tasks which require creativity owing to these teams being equipped with a miscellaneous pool of understanding, skills, and expertise. Some construction professionals see conflict as a chance for finding creative solutions to solve problems. In the literature, it was learnt that if conflict is not well-managed, it can reduce communication among professionals. Diminished communication in the workplace is a serious issue and can be costly to the construction professionals. Poor communication can lead to reduced performance of professionals in the construction industry.

From the literature, it was stated that negotiation is among the major ways of resolving conflict since it provides the chance for a non-violent resolution to the conflict. In addition, negotiation preserves working relationships and likewise develops the bonding among professionals. An additional advantage of making use of negotiation is that it is less costly and it does not contain any official proceedings in comparison with other methods of conflict resolution. Collaboration is also one of the major approaches of conflict resolution whereby a professional attempts to work collectively with the others. This collaboration reveals professionals’ preferences as well as limitations, and engages every construction professional in finding solutions.

2.11 CONCLUSION
From the review literature in this chapter, negotiation and collaboration are shown to be among the most prominent ways by means of which conflict can be resolved. It was found that conflict resolution is necessary for construction professionals so as to improve their performance in the construction industry. Conflict resolution seeks to include professionals in a consensual process.
and enables them to settle their differences, understand their individual moralities and the concerns of one another and settle their incompatibilities themselves and not resolving these through a mandatory decision manner. However, since professionals have been struggling with unresolved conflict situations in the construction industry, there is a need for construction professionals to make proper use of conflict resolution methods. The next chapter reviews literature related to conflict management among construction professionals in both South Africa and Ghana.
CHAPTER THREE

OVERVIEW OF CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS IN THE SOUTH AFRICAN AND GHANAIAN INDUSTRY

3.0 INTRODUCTION
This chapter covers an overview of the two countries, the nature of the construction industry in both South Africa and Ghana. The chapter likewise reviewed literatures on factors that cause conflict among construction professionals in both countries. The impacts of construction professionals conflict on performance in the two countries construction industry, and the methods of resolving conflict among construction professionals. It also reveals literature on the benefits of conflict resolution among construction professionals, and factors influencing conflict management among professionals in the South African and Ghanaian construction industries.

3.1 OVERVIEW OF SOUTH AFRICA AS A COUNTRY
South Africa as a country lies in Southern Africa. It is bordered in the south by 2,798 kilometers of the shoreline of Southern Africa broadening from the South Atlantic to the Indian Ocean to the north neighbouring nations of Zimbabwe, Botswana and in the east and north-east, Swaziland as well as the Kingdom of Lesotho (CIA World Factbook, 2008). South Africa is the biggest country in Southern Africa and the 25th largest nation in the world by land as well as through close to 56 million in people population. South Africa is referred to as the world's 24th most heavily populated country. It is the southernmost country on the continental of the Eastern Hemisphere. According to Census (2011), more than 80 per cent of South Africans are of Bantu lineage, separated amongst a diversity of cultural groups communicating through various African languages, nine of them have official status. The residual general public comprises Africa's biggest societies of European, Asian (Indian), and multiracial lineage. South Africa is a country which has different cultures, religions and languages. Its multicultural organization is reproduced in the Constitution's acknowledgement of 11 recognized languages (South African Fast Fact, 2007)
3.2 NATURE OF THE CONSTRUCTION INDUSTRY IN SOUTH AFRICA

The construction industry is an essential aspect in the economy of any country, irrespective of the level of improvement of such a country. South Africa is not excluded; the country’s construction industry is one of the foremost in the country’s economy, contributing to nearly 6% of the nation’s gross domestic product (GDP) as well as creating several employment opportunities (Aigbavboa, Oke and Tyali, 2016:15). The construction industry is a vital segment of the economy that yields building and civil engineering structures and regulates the level by which investment struggles in a resource-rich nation are transformed into investment outcomes (Windapo & Catell, 2013:65). However, an endowed growth for the industry is government’s infrastructure preparation, which seeks to challenge South African infrastructure desires above the following years. There are main issues which hamper the efficiency of the construction sector in emerging nations comprising insufficient stages of macroeconomic efficiency, inadequate resources, depending on institutional establishments as well as procedures mostly inherited from advanced countries which once governed them, as well as deplorable infrastructural advancement (Gibb & Bust, 2006). Regarding these issues, it is not amazing that construction in emerging countries adds an enormous part to job-related accidents statistics. In contrast with advanced countries, construction sites in emerging countries are more hazardous than those in advanced countries (Hamalainen et al, 2006). The South African construction industry is the third most hazardous industry after agriculture and manufacturing (CIDB, 2004). Small as well
as medium-sized businesses manage and control the construction industry in many developing countries (Kheni, Gibb and Dainty, 2008). However, the construction industry in South Africa and particularly small to medium-sized business have the potential of being drivers of economic improvement, in spite of the South African government’s contribution in enhancing the efficiency of the sector being low.

In actual terms, the yearly development in investment in overall construction works of 0.5% contained civil construction which improved by 2.6% (down from 6.4% real development in 2015), while non-residential as well as residential buildings declined by -3.8% and -2.4% correspondingly. The contribution of civil construction has been falling since 2010. Presently, the percentage allocation of investment in entire construction by government is 65% and the percentage allocation of the private sector is 45%. As at 2010, the private sector has been facing undesirable or very low development in investment. This is because of the strategy ambiguity and little stakeholder self-confidence. Civil construction contributes the largest portion of the entire construction investment of gross fixed capital formation (GFCF), amounting to 65% of total gross fixed capital formation. Civil construction has shown remarkable development, contributing significantly yearly since 2008, but has started exhibiting signs of decelerating with a 2.6% year-on-year development at the end of 2016 (CIDB, 2017:4).

Moreover, the built environment together with construction industry plays an important part in sustainable growth as well as development. The built environment presents more than half of the gross fixed capital investment in most countries including South Africa, and construction productivity, as a universal average, signifies about 10% of universal GDP of the probable US$ 3 000 billion yearly universal productivity of the industry. Emerging nations add 23%, which accounted for 75% of the whole universal job of skilled workers (Rust & Koen, 2011:4).

3.3 FACTORS THAT CAUSE CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN SOUTH AFRICA

According to Marabele (2010:3), communication is one of the foremost causes of conflict in South Africa. Construction professionals communicate differently. Occasionally they use undesirable body language that may results to conflict amongst professionals in the construction industry (Van Deventer & Kruger, 2003). Marabele (2010:3) further stated that individual differences often cause conflict among professionals because they do not allow for their
differences in respect of background, attitudes, personalities, and values. According to Nacker (2003), a message can be intentionally or unintentionally misleading by the sender or the receiver, and lead to conflict. Marabele (2010:3) also stated that a lack of civility frequently causes conflict among South African professionals; if individuals professional are not treated with respect, equality as well as self-esteem conflict may occur among them. Msila (2012:1) stated that conflict occurs wherever and whenever there is a mismatch of perceptions among individual professionals. According to Kazimoto (2013), conflict can occur when ambitions, interests or values of diverse entities or groups are incompatible and upset each other’s efforts to reach goals in an organization. It is a communication process and an unavoidable concern of transactional relationships manifesting in misunderstanding among professionals. Van Tonder et al (2008:376) recognized some factors which can cause conflict such as diversities in knowledge and opinions, rivalry for position and power, personal displeasure, and opposing views or behaviours brings about by the organizational structure, role ambiguity, and differences in goals.

3.4 IMPACTS OF CONSTRUCTION PROFESSIONALS’ CONFLICT ON PERFORMANCE IN THE SOUTH AFRICAN CONSTRUCTION INDUSTRY

Larson and Mildred (2000) note that when conflict is efficiently managed among the South African professionals, it can lead to a productive outcome and can improve performance significantly. However, conflict in itself is neither constructive nor destructive in value terms. It is natural. A study by Jennings and Wattam (2005) also agreed with to the view that conflict is an essential agent to motivate change as well innovation. However, Owens (2001) stated that regular and significant conflict can have an upsetting impact on the construction professionals’ manner which often develops into aggression.

Steyn and Van Niekerk (2002) highlighted that in South Africa conflict can make an individual professionals change the way they work. Conflict handled in a pleasing, problem-solving manner is likely to have a constructive outcome as well as improving communication and enhancing professionals’ organizational development. It can also enable the understanding of complex difficulties, broaden the perceptions of professionals’ organizational life and enhance a foundation to manage differences” (Bennett et al, 2003). However, engaging with conflict can produce solutions, encourage insight and help individuals professionals grow and become emotionally stronger. Conflict can be both destructive and constructive in nature.
According to Nar et al (2015:62), the following are the impacts of construction professional conflict on performance in South Africa:

i. Conflict lead to neglecting of tasks which causes a waste of significant time and money among the South African construction professionals; It causes pressure in dealing with related troubles;

ii. Conflict might cause an emotion of disturbance that presents as destructive manners;

iii. Conflict leads to non-achievement of tasks regarding planning time or neglecting tasks which sometimes influences the reputation of the construction industry harmfully (Narh et al, 2015:62); and

iv. Conflict can enhance decision-making outcomes as well as professionals’ efficiency by enhancing decision superiority (Karthikeyan & Manikandan, 2017:1154).

3.5 METHODS OF RESOLVING CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN SOUTH AFRICA

Spaho (2013:113) revealed that the following are some of the methods of resolving conflict in South Africa:

3.5.1 Integrating

Spaho (2013:113) refers to integrating as a conflict of manner, combined with recognition of issues and suggests a possible way out. This approach is suitable to underlying difficulties that are not always verbalized among the South African professionals. An integrating style is efficient. Therefore, it is not suitable for conflicts arising from dissimilar ideals. Regarding the good side of this approach, construction professionals in South Africa ought to recognize that it requires much time to be accomplished. The conflict is considered as an issue in this method which requires a response, thus both professionals need to make substantial efforts to look for solution or better options while enhancing their resourcefulness (Chou & Yeh, 2007; Verma, 1998).

3.5.2 Obliging

The obliging approach shows little concern for individual self and great concern for other construction professionals which relates with ability to fulfill the desires of the other
professionals (Lee 2008:13). The obliging approach is not suitable for solving problems among South African construction professionals industry.

3.5.3 Dominating

It is common for construction professionals to focus more attention to personal interest than interests that are mutual in the South African construction industry. The construction professionals (CPs) with a higher status may force the lower level professional ones to conform to their decisions. Chou and Yeh (2007) states that the two scopes deliberated in this method are high concern for the self and low concern for others. This method of resolving conflict is normally used by the construction professionals in South Africa who have more power and authority over the others, requesting that the other professionals to agree with their opinions (Giritli et al, 2009).

3.5.4 Avoiding

Iiban (2008:3) states that avoiding occurs when there is little interest by a professional in others. It is inactive approach, which is characterized by avoiding trouble among the construction professionals. This approach is good for unimportant problems, relatively complex and increasing troubles, as it unable to solve the fundamental nature of the difficulties among the professionals in the construction industry.

3.5.5 Compromising

Compromising is the method which needs the maintenance of good will among each individual and common well-being of construction professionals. According to Iiban (2008:3), compromising has its focus in both one’s own as well as others’ interests. According to Yuan (2007) compromising comprises a give-and-take situation whereby professionals can give up something after conciliation so as to attain an agreement. The approach will create I-win and I-lose situation to create cooperation. The professionals’ amend their individual perceptions either because they found adequate reason to do so or just to avoid constant misunderstanding (Lussier, 2010).
It depends on the level of conflict and is concerned for others. Construction professionals might use five styles in resolving conflict, as demonstrated in figure 3.2.

Table 3.1 summarizes the previously described styles of resolving conflict in addition with the situations whereby conflict styles are appropriate and inappropriate for professional’s accomplishment of goals in the construction industry.

The main significant criterion in selecting the appropriate conflict management style is the nature of the goal. For construction professionals, the choice depends on the reason for signifying influence. The sensible deliberation really shows that all problems are reasonable.
Table 3.1. Conflict resolution styles: appropriate and inappropriate

<table>
<thead>
<tr>
<th>Conflict resolution styles</th>
<th>Situations where appropriate</th>
<th>Situations where inappropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrating</td>
<td>1. Troubles are composite</td>
<td>1. Work is unassuming</td>
</tr>
<tr>
<td></td>
<td>2. Combination of thoughts is</td>
<td>2. Instant choice is essential</td>
</tr>
<tr>
<td></td>
<td>improved to exist with improved resolution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Obligation is required in other professionals for decent achievement</td>
<td>3. The other professionals are undisturbed about the conclusion</td>
</tr>
<tr>
<td></td>
<td>4. Time is offered to resolve problems</td>
<td>4. Other construction professionals do not possess the issues solving</td>
</tr>
<tr>
<td></td>
<td>5. A construction professionals only does not resolve the difficulty</td>
<td>Proficiency</td>
</tr>
<tr>
<td></td>
<td>6. Resources own through different professionals are desirable to resolve their frequent troubles</td>
<td></td>
</tr>
<tr>
<td>Obliging</td>
<td>1. Construction professionals trust they might be incorrect</td>
<td>1. Problem is essential to the professionals</td>
</tr>
<tr>
<td></td>
<td>2. Problem is more important to other professionals</td>
<td>2. Construction professionals believe they are right</td>
</tr>
<tr>
<td></td>
<td>3. Construction professionals are eager to surrender something in barter for something from the other professionals in the future</td>
<td>3. The other professionals is incorrect or immoral</td>
</tr>
<tr>
<td></td>
<td>4. Maintaining relationship is significant</td>
<td></td>
</tr>
<tr>
<td>Dominating</td>
<td>Avoiding</td>
<td>Compromising</td>
</tr>
<tr>
<td>------------</td>
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<td>--------------</td>
</tr>
<tr>
<td>1. Problem is unimportant</td>
<td>1. Problem is unimportant</td>
<td>1. The professionals goals are jointly special in the construction industry</td>
</tr>
<tr>
<td>2. Quick resolution is required</td>
<td>2. Possible dysfunctional result of challenging the other professionals more significant than the advantages of resolution</td>
<td>2. Professionals are uniformly influential</td>
</tr>
<tr>
<td>3. Disliked route of exploit is applied</td>
<td>3. Chilling off time is required</td>
<td>2. Difficulty is complex sufficient requiring an advance of problem-solving</td>
</tr>
<tr>
<td>4. Required to deal with self-confident assistant</td>
<td></td>
<td>3. Agreement does not be accomplished</td>
</tr>
<tr>
<td>5. Adverse choice through professionals may be costly to others.</td>
<td></td>
<td>1. A professional is more influential</td>
</tr>
<tr>
<td>6. Assistant does not have proficiency to make technological choice</td>
<td></td>
<td>2. Required to deal with self-confident assistant</td>
</tr>
<tr>
<td>7. Problem is significant to professionals</td>
<td></td>
<td>3. Agreement does not be accomplished</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Problem is complicated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Problem is not vital to professionals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Both professionals are uniformly influential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Choices might not have to be made speedily</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Problem is essential to professionals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. It is the construction professional’s duty to make choice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Professionals are unwilling to postpone; problem should be determined</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Speedy notice is required in this style</td>
</tr>
</tbody>
</table>
4. Incorporating or controlling style is not flourishing
5. Provisional answer to a complex difficulty is required

Source: Spaho (2013)

3.6 BENEFITS OF CONFLICT RESOLUTION AMONG CONSTRUCTION PROFESSIONALS IN SOUTH AFRICA

Brender (2012: 1) revealed some major benefits of resolving conflict among professionals in South Africa such as the following:

3.6.1 Conflict resolution improves conflict management skills

Construction professionals help to overcome wariness, avoid becoming awkward when anxious, and handle anger (Brender, 2012:4). Moreover, conflict resolution usually helps South African construction professionals in enhancing their style of managing conflict in the construction industry.

3.6.2 Conflict resolution builds and maintains long-term relationships

The South African construction professionals can develop lasting relationships by successful conflict resolution among themselves in the construction industry. It will help construction professionals to boost their self-assurance and helps the professionals as they construct as well as maintain lasting relationships. Possibly two of the best tools professionals employ are efficient annoyance management support and how to say what you mean and stick to what you want, whenever professionals are fewer to the majority capability to resolve issues (Brenda, 2012:4).

3.6.3 Conflict resolution reduces tension among professionals

The reduction of tension is essential to incorporate into South African construction professionals’ in everyday activities with the help of conflict resolution. According to Manikkalingam (2006), conflict resolution is in tension when account or liability is raised among the construction
professionals. As affirmed before, when construction professionals are able to handle conflict their individual relationships in the construction industry become improved (Brenda, 2012:4).

3.6.4 Conflict resolution Increased different styles of thinking and behaviours

Every construction professionals in South Africa professional possess dissimilar habits of thinking and performing. In the construction industry, some styles can actually annoy the professionals while professionals actually like others. For instance, some professional’s starts to imagine while others require time before they can talk about an issue in the construction industry. Some professionals like to do things by the book while others need to do things their way (Brender, 2012: 5).

3.7 FACTORS INFLUENCING CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS IN SOUTH AFRICA

3.7.1 Time pressure

This is a persistent factor which affects conflict management, but must be dealt with. According to Paola and Gioia (2014), decisions are regularly taken under time pressure by the professionals. Individual’s professionals involving in negotiations as well as having to decide speedily whether to agree or oppose an offer experience time pressure. However, the South African construction professionals are also subject to serious time pressure. Pressure is faced in many occasions by professionals in determining about organization policies.

3.7.2 Lack of communication

A common factor which influences conflict management is lack of communication among professionals in South Africa. Communication is rarely perfect, and a lack of communication may result in confusion and misapprehend the sender. Because the receiver may not be listening attentively, he or she may misunderstand the sender. The outcomes can be a misunderstanding about the aims, roles, or purposes. At times information is withheld deliberately for individual gain or to humiliate other professionals (Okoh et al, 2016:137).

3.8 OVERVIEW OF GHANA AS A COUNTRY

Ghana as a country is situated in West Africa (WA), bordered by the Ivory Coast (Côte d'Ivoire) in the west. It was created through the amalgamation of the British colony of the Gold Coast as
well as the Togoland trust territory. Ghana turn out to be the first sub-Saharan country in colonial Africa to achieve its independence in 1957. Ghana (GHA) is separated into ten regions, while the capital is Accra. Ghana’s official language is English while the currency is the Ghana cedi (GHS). Ghana is blessed by means of natural resources. In the political environment, Ghana has a stable cooperative legitimate democratic system which was established by means of elections by open and free international adult suffrage. Ghana as a country has experienced a three-level evolution of transformation of governments in the present self-governing indulgence. The main arms of government are the Executive, Legislature, and Judiciary. Every one of the arms of government is independent on the others. In the neighboring stage, the constituency assemblies are the highest political and managerial authority in every constituency, with deliberative, decision-making, and legislative powers (CIA World Factbook, 2016). According to Moss and Majerowicz, (2012), Ghana has profited from a steady and independent political system as well as a high rate of economic development. The recognition of oil in commercial quantities in 2007 facilitated fuel this development. Ghana became a middle-income nation in 2010, ahead of schedule, owing to technical statistical improvement.
3.9 OVERVIEW CONSTRUCTION INDUSTRY IN GHANA

The Ghanaian construction industry is wide in scenery and it comprises variety of professionals (Dadzie, Walker and Kwame, 2012:256). However, growing yearly as a provider to the nation economy, Ghana’s construction industry is progressively more dynamic and directed by private sector professionals. Ghana’s construction industry has experienced inspiring development in the past twenty years and been an important provider to the financial revolution that has made Ghana a middle-income nation. Additionally, it employs 320,000 people and roughly 2% of youths, and provides more training as well as apprenticeship chances to different youths than any other sector (Owusu, 2012). According to Assibey-Mensah (2009), earlier and subsequent to Ghana independence which was 1957, the Ghanaian construction industry was under the control of foreign companies such as Taylor Woodrow companies and the A. Lang Company. Ghana’s GDP increased to 4.1% in the first quarter of 2015, measured against 3.8% in the similar period in 2014. Construction activities contributed $3.8bn to the GDP in 2014. At existing prices, based on the Ghana Statistical Service, this was equivalent to 12.7% of the GDP and up 26.9% from $2.9bn in 2013. The industry has urbanized significantly more than in the previous decade by more than $280.3m in 2006, as well as increasing in importance to the broader financial system, more than doubling as a contributor to the GDP from 5.7% in 2006. Private as well as foreign construction industry appears in Ghana during the period of 2000 to 2008 (Guadu-Asiedu, 2009). According to Ernst and Young (2012), Ghana is amongst the seven African countries projected as the ten fastest-growing economies worldwide over the following five years. The construction industry in Ghana has emerged as the fastest developing industry for the past ten years (Anaman & Osei-Amponsah, 2007; Sutton & Kpente, 2012) and the second main provider to industrial productivity after the manufacturing industry (Twerefou et al, 2007). Productivity development (linked to industrial productivity) is similarly determined by technology transformation (Fu, Pietrobelli and Soete, 2011).
The construction sector in Ghana embraces huge potential for inspiring growth, improving project exports as well as creating employment. The local construction sector is among the fastest developing sectors, with an inspiring usual development of 7-8 % yearly. The substance of an advanced development level rests on a comprehensive and well-organized infrastructural growth which enables the construction industry a significant sector. The fast growth of infrastructure by government as well as the private sector has fashioned construction activities and fuelled requests in various vital sectors such as cement, steel, glass, and timber as well as earth-moving equipment and machines. The construction segment is a vital industry comprising strong recessive as well as advancing development linkages (Osei, 2013:56).

3.10 FACTORS THAT CAUSE CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN GHANA
Conflict may occur among the construction professionals in Ghana for numerous reasons. According to Silver and Furlong (2004), the complex dependences and interrelationships through construction professionals bring about conflict. According to Katleen (2003), conflict builds up as a result of inadequate resources among the construction professionals such as lack of sufficient time and money. Hall (2002) recognized causes of conflicts as an inability to know responsibility and lack of information dissemination. Likewise, Verma (1998) states that the causes of conflict among constrution professionals in Ghana are: lack of communication, lack of respect, faulty listening proficiency and opinion differences. Thus all these cause communication difficulties. In addition, other causes of conflict in an organization usually caused by communication failure are misunderstandings, and failure to follow instructions given.

Chong (2011) states that the major factor leading to conflict is mistrust, and the mistrust is frequently due to different cultures and idealistic beliefs as immediate possible sources of workplace conflict. Weddikkara (2003) stated that conflict among professionals occurs because of a variety of mutual relationships which occur in the construction industry with numerous conflicts arising from unexplainable statement, as well as opposing potential.

3.11 IMPACT OF CONSTRUCTION PROFESSIONALS’ CONFLICT ON PERFORMANCE IN GHANA
According to Munira (2013:29), conflict can bring opportunities for creativity that improves Ghanaian construction professionals’ performance. Moreover, if conflict is been managed well, it can results to decisions being well thought-out and possibly re-evaluated to make sure the
amount of information used for choice making is adequate. A well-managed conflict leads to innovation and upright transformation among the Ghanaian construction professionals (Cossier & Dalton, 1990). A well-managed conflict among the Ghanaian construction professionals will maintains the ambition of the professionals’ organization and enhances their performance among construction professionals. Massey and Dawes (2004:6) state that well-managed conflict has a positive impact on professionals which flows from interaction that happens whenever functional conflict occurs. However, Conflict gives professionals in Ghana the possibility to recognize issues. A well-managed conflict brings new ideas and development among construction professionals in Ghana.

According to Massey and Dawes (2004:6), unmanaged conflict tends to reduce the performance of professionals in the organisation because it affects professionals negatively in the performance of their task. Moreover, unmanaged conflict is one of major issues that affect construction professionals in achieving their goals and prevent the reaching of organizational goals. It reduces construction professionals’ performance and leads to minimized productivity. According to Schermerhom et al (2008), some conflict decreases professionals’ organization unity, enhances conflicts among the professionals and creates a bad environment for professionals. Moreover, dysfunctional conflict minimizes job satisfaction and work production more than the average turnover in jobs. Dysfunctional conflict results to some serious impacts, including increased financial and professional costs. Conflict can results to obstruction, pressure, low morale, missing consultation deadlines, lack of self-assurance, low independence levels, communication issues, absenteeism, and lawful proceedings (Buss, 2009). Also, unresolved conflict affects Ghanaian construction professionals’ health and well-being, which in turn leads to absenteeism. It is a usual form of absence from responsibility (Johns, 2007).

3.12 METHODS OF RESOLVING CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN GHANAIAN CONSTRUCTION INDUSTRY
A study by Kassim and Ibrahim (2014:3) identified dominating as one of the major methods in resolving conflict. They describe dominating as a method which posses’ high concern for the self and low concern for the other professionals involved in the conflict. In dominating, a construction professional is more concerned about his own interest than the interest of others (high assertiveness and low cooperativeness). The style is linked with being competitive. According to Back and Back (1994), a dominating construction professional has the objective
winning so would do anything possible to achieve the objectives and by so doing, neglects the interests of others. According to Rahim (2002), integrating can be used in resolving conflict among professionals. He further stated that this integrating style encompasses significant variables such as honesty and information exchange, finding alternatives and the assessing differences to achieve an efficient solution which is satisfactory to both professionals. Here, the parties are expected to open up and exchange ideas, because this style involves an exchange of ideas among the construction professionals. An integrating style has been identified as the most active approach in conflict resolution because it involves all the professionals involved in a conflict resolution situation (McNary, 2003; Steyn & Van Niekerk, 2002). Rahim (2002) further identified compromising as a method of resolving conflict. However, according to Rahim (2002), the compromising method is not suitable for handling complex problems that require problem solving. However, some professionals still use it and they end up with a bad outcome. Compromising takes place when there is an intermediary between concern for self and other construction professionals (moderate assertiveness and moderate cooperativeness). Furthermore, prolonged conflicts could be handled effectively using the compromising style. In the avoiding style the construction professionals have little interest for both self and other professionals (Lee, 2008:14). Construction professionals who use the avoiding style fail to meet both their own needs and those of others too. These construction professionals think it is not worth confronting the other professionals.

3.13 BENEFITS OF CONFLICT RESOLUTION AMONG THE CONSTRUCTION PROFESSIONALS IN GHANA
Conflict resolution plays an essential role in enhancing professionals’ performance in Ghana construction industry growth. Conflict resolution enhances professionals’ productivity in the construction industry (Rahim, 2002). Whenever conflicts occur among the Ghanaian professionals, it slows down the activities of professionals in the industry and could lead to inefficiency if not managed well. However, when sufficient attention is given to every conflict in the construction industry, no matter how insignificant they may be, an analysis could be made and suitable interventions could be implemented so that improved performance can be achieved. In situations where the conflict type was destructive rather than productive, the suitable conflict resolution strategy should be employed; if not, construction industry efficiency may not be
achieved. If the conflict is not constructive and the appropriate conflict resolution mechanism is not employed, organizational effectiveness may be compromised. Conflict resolution enhances professionals’ organizational learning. According to Rahim (2002), conflict resolution helps professionals in Ghana to obtain a deeper perspective of problems in order to apply suitable measures to deal with them efficiently.

3.14 FACTORS INFLUENCING CONFLICT MANAGEMENT IN THE GHANAIN CONSTRUCTION INDUSTRY
Conflict management can be influenced through professionals’ leadership status issues. This takes place when a construction professional’s effort to enhance his or her leadership status may compromise other professionals’ ranking (Legotlo et al., 2003). According to Van Deventer and Kruger (2003), a professional’s awareness of unfair behaviour, which is the accomplishment of professionals’ strategy and practice or reward and punishment systems can influence conflict management. Daresh (2002) also identified role ambiguity as factors which can influence conflict management. He described role ambiguity as the mis-arrangement between the necessities of carrying-out the job as well as the person chosen to do the job.

However, role ambiguity is the actual divergence in function or duties among individual who are mutually dependent in a work environment (Fisher, 2000). According to Legotlo et al (2003) and Gerardi (2004), communication problems among professional can influence conflict management. They stated that communication issues occur among professionals because not all construction professionals have significant information to be disseminated. Thompson et al (2000) identified limited communication as one of the main factors influencing conflict management.
3.15 LESSON LEARNT

From the literature, it was discovered that inadequate communication is among the notable causes of conflict among professionals in South Africa. Construction professionals sometime communicate differently. Occasionally they use undesirable body language which may result to conflict amongst professionals in the construction industry. A message can be intentionally or unintentionally misleading by the sender or the receiver, and lead to conflict. However, a difference in opinion is among the major factors that cause conflict among professionals in Ghana.

In addition, it was learnt that whenever conflicts are efficiently managed, they can lead to a productive outcome and can improve performance among construction professionals. Conflict in itself is neither constructive nor destructive in value terms.

From the literature, it was revealed that conflict resolution increased different styles of thinking and behaviours among construction professionals. Every construction professional possesses different habits or thoughts. Some professionals contrary to imagine issues while others require time before they can talk about an issue in the construction industry.

The literature revealed compromising as one of the methods of conflict resolution among professionals in South Africa. Compromising comprises a give-and-take situation whereby professionals will give up something after conciliation so as to attain an agreement. It creates an I-win and I-lose scenario achieve a compromise. The construction professionals change their own perceptions if they found good reason to do so or just to avoid constant misunderstanding.

Dominating is one of the major methods in resolving conflict among professionals in Ghana. Dominating is a method which comprises high concern for the self and low concern for the other professionals involved in the conflict. In dominating a construction professional is more concerned about his or her own interests than the interest of others (high assertiveness and low cooperativeness). A dominating construction professional has the objective of wanting to win so they would do anything possible to achieve the objectives by so doing, ignoring the interest of others.
3.16 CONCLUSION
This chapter presented an overview of the nature of the construction industry in both South Africa and Ghana. It also highlighted various factors that cause conflict among construction professionals of which inadequate communication is one of the major causes of conflict among professionals in South Africa. The impacts of construction professionals’ conflict on performance in construction industry was discussed. It was indicated that a constructive conflict can enhance decision making outcomes and benefit the professionals. The benefits of conflict management among construction professionals, namely that, conflict resolution increased different styles of thinking and behaviours among construction professionals. The integrating style was revealed as one of the methods of conflict resolution among construction professionals in Ghana and factors influencing conflict management among professionals in the South African and Ghanaian construction industries. Unrelated views of scholars and researchers on the study were reviewed. The next chapter reviews literature related to conflict management among construction professionals in both Canada and China.
CHAPTER FOUR
CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS IN CANADA AND CHINA

4.0 INTRODUCTION
This chapter emphases on overview of Canada and China as countries, the nature of the construction industry, the factors that cause conflict among construction professionals, the impacts of construction professionals’ conflict on performance, methods of resolving conflict among construction professionals, the benefits of conflict resolution and factors influencing construction professionals in the Canadian and Chinese construction industries.

4.1 OVERVIEW OF CANADA AS A COUNTRY
Canada as a country is positioned in the northern area of North America. Canada has ten provinces as well as three territories. It covers 9.98 million square kilometers (3.85 million square miles), making the world's second-biggest country. Canada is sparsely inhabited, most of its region being under forest and tundra with mountains. Canada is extremely built-up, about 82% of the 35.15 million of people are focused in the densely inhabited areas, especially near the boundary in the South. Canada has it is capital located at Ottawa, while the three biggest cities are Toronto, Vancouver and Montreal. Canada's type of weather conditions differs extensively across its huge region, from wintry weather in the north, to hot summers in the southern parts. For thousands of years a number of local peoples have occupied what is at present Canada. Canada can be referred as a built-up country which has the fifteenth-highest nominal per capital revenue worldwide with the tenth-highest position in the Human Development directory (CIA World Factbook, 2010).
4.2 NATURE OF CONSTRUCTION INDUSTRY IN CANADA

The bases of the Canadian construction industry were established in 1605, after French crafts worker at Port-Royal, Nova Scotia created the first European long-lasting structures in the country, a little gathering of homes for newly landed foreigners to New France (Harvey, 2016:13). Two years after, in 1607, the first water mill in North America was built in the neighbouring zone, on the L’Equille River, to help with the grating of indigenous full-grown corn. From diffident starts, an enormous industry has grown. Currently, the construction industry in Canada and its interrelated sectors comprising nearly 13% of entire GDP (Statistics Canada, 2013). The financial activities of builders as well as interrelated subtrades such as electrical, plumbing, bricklayer, carpenter, air system installers) accounts for almost 6% of GDP. Moreover, the Canadian construction sector has augmented a strong reputation for dependability.
as well as innovative design (Manseau & Seadon, 2001). Canada as a country has established proficiency in irreplaceable construction sectors, containing cold-weather engineering as well as construction, the design and building of hydroelectric power projects, the renovation and safeguard of salt-affected constructions, and controlling of the internal surroundings (Manseau & Seadon, 2001).

4.3 FACTORS THAT CAUSES CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN CANADA
Loke (2013:6) categorized three factors that lead to conflict among professionals. The factors are agreement issues, behavioural issues and nominal issues. In agreement issues the causes are ambiguities and inaccuracies regarding professionals’ tasks. The internal conflicts are caused by the scope of organization changes and errors in professionals’ work. Then, internal conflicts are due to management problems such as poor management and a lack of quality assurance. According to Leong et al (2011), faulting on agreements, payment disagreements, communication issues, and lack of good administration can lead to conflict among the professionals. A professional conflict is referred to as a conflict that comprises understanding and explaining together with interpreting the organization agreement (Jaffar et al, 2011). Carmicheal (2002) also identified some factors that cause conflict among Canadian professionals which are lack of coordination, lack of organization, delay or postponement of tasks, inadequate understanding and conformity and unwillingness to seek clarification. Verma (1998) stated that the most frequent causes of professionals conflict include lack of communication, disrespect among professionals, imperfect listening skills and opinion divergence all these can cause serious communication breakdown

4.4 IMPACTS OF CONSTRUCTION PROFESSIONALS’ CONFLICT ON THE PERFORMANCE OF THE CANADIAN CONSTRUCTION INDUSTRY
According to Darling and Walker (2001), conflict results in change while Swanström & Weissmann (2005) contends that conflict brings about to adaption resulting in development. It is the capability to get alongside with Canadian professionals which decides the achievement or disappointment for each professional in conflicting circumstances (Darling &Walker, 2001). Vokić and Sontor (2009) stated that if conflict is not managed-well, it will results to litigation. Conflict minimizes trust among construction professionals and reduces motivation (Mohammed et al, 2008). According to Warner (2000), conflict minimizes a team’s reputation as well as
cooperation among professionals in Canada. Moreover, conflict can cause damage to construction professional work in the Canada.

4.5 METHODS OF RESOLVING CONFLICT AMONG THE CONSTRUCTION PROFESSIONALS IN CANADIAN CONSTRUCTION INDUSTRY
Thakore (2013) had shown the following as foremost methods of resolving conflict among professionals in Canada:

4.5.1 Avoiding
Construction professionals would rather conceal and disregard conflict than resolving it. This kind of method of dealing with conflict is unsatisfactory and unassertive. Construction professionals (CP) tend to give up personal goals and exhibit inactive behaviour, thereby creating lose-lose situations. The Canadian construction professionals believe it is healthier to avoid a conflict than to resolve it. This kind of method of resolving conflict is helpful to maintain a connection that would be upset by conflict resolution. The issue in the construction industry, however, remains unresolved (Thakore, 2013:12).

4.5.2 Smoothing
This is the strategy which conciliation take place whenever individual construction professionals (CPs) are eager to give way to the other professional in the construction industry (Thakore, 2013). According to Salami (2009:45), a smoothing approach rates low on boldness as well as high on cooperativeness, de-emphasizes diversities common to both professionals.

4.5.3 Confronting
The confronting strategy of conflict refers to strong cooperative and confident conducts. Confronting is regarded as a win-win method in interpersonal conflict management. Construction professionals making use of confronting wish to make the most out of a joint outcome. Any construction professional that makes use of the method is liable to perceive conflict as normal, obliging, and important to a more resourceful solution if managed well. Having confidence in other construction professionals in a conflict circumstance could lead to the satisfaction of all parties. A confronting style is most useful to discover an integrative response (Thakore, 2013:13).
4.6 BENEFITS OF CONFLICT RESOLUTION AMONG CONSTRUCTION PROFESSIONALS IN THE CANADIAN CONSTRUCTION INDUSTRY

John (2017) identified the following benefits in resolving conflict among professionals in Canada:

i.) Conflict resolution helps to promote stronger relationships among the Canadian construction professionals by enhancing consciousness with kind of various purpose of opinion and enlightening construction professionals (CPs) about how to avoid conflict in the construction industry.

ii.) Conflict resolution promotes a problem-solving state of mind and approach among the Canadian professionals. Having construction professionals at the frontline of conflict resolution is a great way of training significant problem-solving techniques.

iii.) Conflict resolution decreases pressure and anxiety with an efficiently implemented and managed conflict resolution plan among professionals (John, 2017).

4.7 FACTORS INFLUENCING CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS IN CANADA

4.7.1 Distrust among the professionals

Sztopka (2016:16) noted that distrust refers to uncertainty about the future plans of other professionals in the Canadian construction industry. To increase trust for individual professionals may be a threat; it is complicated to put trust since professionals comprise a precedent violence and doubt in trusting other professionals when working together to accomplish their goals.

4.7.2 Culture barriers

The diversities of culture among Canadian construction professionals are affecting the way conflict is been managed. Culture barriers occur when professionals find it difficult to change the culture. Cultural barriers have critical impacts on the outcome and successful completion of professionals’ tasks (Kivrak, 2008:3).

4.7.3 Communication problems among the professionals

Communication ought to be shared, transparent as well as useful and open according to the perceptive of Canadian construction professionals (Moore et al, 1992; Sanders & Moore, 1992).
However, whenever there is inadequate communication among Canadian construction professionals, it usually influences conflict management.

4.8 OVERVIEW OF CHINA AS A COUNTRY

China is positioned in East Asia. China is the world's most densely populated country, having a population of about 1.404 billion. The country is a united mixed country with the Han nationality being the majority. China is among the four furthermost primitive civilizations country throughout the world having Yellow River and Yangtze River as its pedestal. Presently, China is managed by the Communist Party of China founded in 1921. China has 22 provinces, five independent territories, four directly-managed metropolises which are Beijing, Tianjin, Shanghai and Chongqing with two secretarial districts of Hong Kong and Macau. Since the financial reform occurred in 1978, China has gone ahead internationally as a quick-rising control house in South-east Asia. According to the OCED (2012:16) over the preceding years, China has progressed towards a market-oriented economy. Such a transformation originally involved a noticeable rise in inequality, which was an unavoidable concern of the transformation of the economy which has brought an advanced and more persistent development in incomes than perceived in any other foremost economy.
4.9 NATURE OF CONSTRUCTION INDUSTRY IN CHINA

Regardless of China’s enormous growth in its national economy as well as in the construction industry, researchers usually refer to the construction industry in China as a fragile sector by global criteria owing to its insufficiently authorized background and mechanisms. Little output, moderately unsophisticated construction equipment as well as skills, and little global market share with small kinds of tasks (Xu et al, 2005). After China’s admission into the World Trade Organization (WTO) in December, 2001, it was progressing towards an additional open and market-driven budget, also as a concern numerous rules by means of limitations on foreign
involvement were eradicated or adapted. Moreover, the gross output worth of foreign-funded construction industry in China is growing. Their impact on the global Chinese construction industry is still limited, and a limitation on project types carried out by foreign-owned companies still exists. The reason is that since these limitations and the weirdness of the U.S. architectural, engineering and construction (AEC) companies together with construction market in China, they were only slightly prosperous in the Chinese market in the form of market share (Chui & Bai, 2009).

China’s resilient manufacturing sector offers important assistance for the growth of the construction industry in the provision of plant, equipment as well as materials. The Chinese construction sectors continue to be labour-intensive by contrast with some other industrialised or emerged countries. Chinese contractors have better understanding in handling bigger scale projects, adopting advanced technology inputs from its resilient manufacturing sector. Grounded on the input-output analysis, it can be understood that the Chinese construction industry has a ten times robust affiliation with the machinery manufacturing sector than some countries construction sector (Chen et al, 2014).

4.10 FACTORS THAT CAUSE CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN THE CHINESE CONSTRUCTION INDUSTRY

A study by Yates and Hardcastle (2003) showed a marked growth in conflicts which results to high costs both in terms of direct and indirect costs for Chinese professionals. The direct costs included the costs for lawyers, organization time and interruptions in professionals’ work, while the indirect or consequential costs included collapse of working relations, distrust, and lack of cooperation among the Chinese professionals. Overton and Lowry (2013) also revealed some common factors that causes conflict which comprises ambiguity with anticipations, inadequate communication, lack of clear authority, differences in personality, and change order. Behaviour that can lead to conflict includes limited communication and physical violence (Rogers et al, 2009). Runde et al (2010) identified personality diversity, stress, poor leadership, lack of trust, and role ambiguity as the utmost causes of conflict in China. According to Chong (2011), the major cause of conflict is distrust, and it is frequent due to dissimilar beliefs and unrealistic prospects as the subsequent probable cause of conflict among professionals in China.

4.10.1 Problems in communication
The limited communication of professional’s affairs negatively affects relationships among construction professionals in China. Moreover, insufficient information with unpleasant occurrence is among many of the problems which usually lead to conflict. A lack of sincerity and non-approachable plan of professionals usually have destructive impacts on the professional’s communication (Tourish, 2003).

4.10.2 Role ambiguity

In every construction industry, each professional holds one job position which has been laid down in an organization plan with tasks analysis being adopted to obtain job descriptions regarding professionals’ tasks specifications. A specific responsibility is anticipated to be done by the professionals (Mullins, 2007; Singh, 2008; Van Wart, 2000). However, role ambiguity is merely an uncertainty of professional’s tasks in the Chinese construction industry.

4.10.3 Incompatible goals or goal conflict

Conflict might take place if construction professionals recognize that only one goal might be accomplished and that there are fewer chances for the other professionals’ goals to be accomplished (Deutsch, 1969; Tjosvold, 1998). However, whenever professionals in the construction industry have different goals and ambitions which are not aligned with others, it usually leads to conflict.

4.11 IMPACTS OF CONSTRUCTION PROFESSIONALS’ CONFLICT ON PERFORMANCE IN THE CHINESE CONSTRUCTION INDUSTRY

Boyle (2017) revealed some of the major impacts of conflict in China such as conflict resolution helps to maintain healthy relationships, conflict resolution improves productivity and conflict resolution leads to personal growth and insights.

4.11.1 Conflict helps in maintaining healthy relationships, morale and commitment

Conflict that is appropriately managed usually improves healthy relationships and commitment to tasks among Chinese construction professionals. According to Howe (2002:20), healthy relationships lead to determined attempts to look for resolutions that respect the human rights of each professional and recognize the responsibilities of individual professionals.

4.11.2 Improves productivity of professionals
Conflict improves productivity which will likely be an asset in terms of time and effort so that each Chinese construction professional can increase his or her performance in the construction industry. Moreover, whenever conflict is managed well, it regularly eases up professionals to focus on their jobs rather than leading to anxiety in the workplace. This will lead to increased efficiency (Boyle, 2017).

**4.11.3 Personal growth and insight**

Conflict issues could assist Chinese construction professionals to be more aware about themself and others (Boyle, 2017). However, a well-managed conflict normally enhances growth and understanding among Chinese construction professionals.

**4.12 METHODS OF RESOLVING CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN THE CHINESE CONSTRUCTION INDUSTRY**

Rahim, (2001), Chen and Tjosvold (2002) revealed some major of the methods of resolving conflict such as avoiding, compromising, collaborating, forcing/competing, and smoothing/accommodating.

**4.12.1 Avoiding**

This is the approach which exhibits only slight concern for self and other professionals (Rahim, 2001: 27–28) and is a method of conflict management that favours postponing issues and avoiding any conversation causing breakdowns in communication among the Chinese construction professionals concerned in the conflict.

**4.12.2 Compromising**

This is where conflicting professionals endure their differences as they are grateful to discover an answer which is satisfactory to both professionals (Anna, 2016: 588). Lim and Yazdanifard (2012:146) further stated that compromising comprises a give-and-take condition whereby both professionals will give up something after negotiation so as to attain an agreement.

**4.12.3 Collaborating**

This occurs when the conflicting Chinese professionals in a constructive manner increase the message needed to solve some disagreement as well as to discover the most satisfactory resolution. Moreover, this method have involve differences with general discussion of the barrier in order to come up with innovative resolutions. It encourages honesty of significant basics for
effectual collaboration among the Chinese professionals (Chen & Tjosvold, 2002; Rahim, 2001; Tjosvold, 2008; Tjosvold et al., 2000).

4.12.4 Forcing/competing

This is when construction professional make use of force to solve disagreements among other professionals concerned. According to Rahim, (2001: 27–28), a forcing approach leads to a binary, ‘win–lose’ outcome and shows high concern for the self and low concern for other Chinese professionals involved in the conflict.

4.12.5 Smoothing/accommodating

This is the method of determining the circumstances surrounding the conflict as well as the reason for the breakdown which gave rise to the conflict among the construction professionals. According to a study by Rahim (2001: 27–28), the smoothing method comprises little concern for the self and greater concern for other professionals.

4.13 BENEFITS OF CONFLICT RESOLUTION AMONG CONSTRUCTION PROFESSIONALS IN THE CHINESE CONSTRUCTION INDUSTRY

Frost (2007) revealed the following major benefits of conflict resolution among professionals in the China:

4.13.1 Conflict resolution builds stronger relationships

Inadequate handled conflict usually causes opposition among the Chinese construction professionals, perhaps harming effective working relationships. Through learning how to determine conflicts in a specialized, deferential method, the professionals concerned are able to improve their relations. This proficiency facilitates construction professionals in china to achieve mutual goals as the professionals concerned how to find the ways of dealing with quarrels of hostility, offensive behaviour or ignoring one another. The contemporaries can be taught how to improve their working relations collectively, which might assist to conducting their business in the construction industry (Frost, 2007).
4.13.2 Conflict resolution helped in problem solving

Conflict resolution in the Chinese construction industry enables professionals to resolve their own troubles promptly with successfully. It permits the run of activities to persist in the construction industry with no extensive disturbance suitable to conflict which goes uncertain. Professionals who recognize how to manage conflict are as well less likely to sprint to the director to resolve each divergence which correlated to work. All professionals, together are capable to work further competently due to the resolving of problem proficiency (Frost 2007).

4.13.3 Conflict resolution reduces tension

Conflict resolution minimizes tension among the Chinese construction professionals (CPs) if it is managed appropriately. A misunderstanding which stays unresolved causes tension which spreads to other professionals who were not initially concerned. Whenever both construction professionals imagine they are correct and refuse to pay attention to each other, they might trouble themselves in disagreement to each other.

4.13.4 Conflict resolution increases professionals’ understanding

Conflict Chinese resolution allows professionals enhance their individual approaches with a view to creating goal achievement through a better understanding. According to Amft (2016), there are five ways of increasing understanding in conflict such as engaging in some self-reflection, considering content, finding the time, being honest and being respectful.

4.14 Factors influencing conflict management among professionals in the Chinese construction industry

Noraini et al (2014: 607-609) revealed some of the following factors affecting conflict management in China:

4.13.1 Leadership

Poor leadership surely affects conflict management among professionals in the Chinese construction industry. In active conflict management, construction professionals have major roles to play, involving understanding, qualities and ensuring leadership roles. Some
professionals perceive conflict as demonstrating a vigorous cooperation that produces the best ideas. The best way to deal with conflict is to make sure of a good outcome by choosing each professional for their attitude and for their capacity to work in various groups in difficult situations (Noraini et al, 2014: 607).

4.14.2 Behavior/Personality

A Chinese construction professional might make contributive wants and then modify the struggle with an incorporate acknowledgement of the other construction professionals’ circumstances. Noraini et al (2014:608) stated that the efficiency of professional’s personality in the construction industry is based on how he or she handles conflicts. Moreover, bad behaviour or a weak personality has a negative influence on conflict management among construction professionals.

4.14.3 Lack of professional gender equality

Construction professionals’ tasks are increasingly more difficult in terms of differences in age, gender, race, language and nationality in Chinese construction industry. According to the ILO (2008:1), gender roles and equality are generally determined, transform over time as well as space and are subjected to social, cultural and environmental factors. In the construction industry there are various working styles between male and female construction professionals which usually influence conflict management.

4.14.4 Communication

A communication process usually takes place between two or more construction professionals when a message is ready and ready to be sent by the communicator, and then is understood and processed by the receiver in the construction industry. Hussain et al (2013: 44) states that communication informs and edifies professionals in all positions and inspires them to maintain an open communicative conducts. Communication among the Chinese professionals may be deliberate or not deliberate, may engage conservative or alternative signals, may take linguistic or non-linguistic forms and may occur through verbal or other modes. However, the basis of conflict management is how efficiently construction professionals in China communicate. Professionals using effective communication will be able to manage conflicts with a better degree of success.
4.15 LESSON LEARNT

From the Literature, it was revealed from the literature that confronting is among the most popular methods of resolving conflict among construction professionals in Canada. The confronting strategy of conflict resolution refers to tough as well as confident manners. Confronting is regarded as a win-win method in interpersonal conflict resolution. Any construction professional that makes use of the confronting method is liable to perceive conflict as normal, helpful, and important to a more satisfactory outcome if managed well.

It was revealed from the literature that conflict resolution in the Chinese construction industry enables professionals to resolve their own challenges quickly. It permits the run of activities to persist in the construction industry with no extensive disturbance suitable to conflict which goes uncertain. From the literature, it was revealed that poor leadership is among factors that can influence conflict management among construction professionals in China. In active conflict management, professionals have major roles to play, involving understanding, and ensuring leadership roles. They perceive conflict as demanding cooperation that produces the best ideas. The best way to deal with conflict is to make sure of a good outcome by choose professionals for their attitude and for their capacity to work in various groups in difficult conditions.

4.16 CONCLUSION

This chapter covers an overview of the Canada and China as countries as well as the nature of the construction industries in both countries. This chapter revealed that the major factors that cause conflict among construction professionals in Canada are differences in opinion and lack of coordination. It was likewise stated that conflict damages minimizes team’s reputation as well as minimizing cooperation among professionals as impacts of construction professionals conflict on performance. Regarding the benefits of conflict resolution in China, this chapter also revealed that conflict improves productivity which will likely be an asset in terms of time and effort at the beginning to get each construction professional in China to increase their performance in the construction industry.

Methods of resolving conflict among construction professionals and factors influencing construction professionals in Canadian and Chinese construction industry. Collaborating is among major methods of resolving conflict in China as revealed in the literature. It was indicated
in the literature that communication problems are among the major factors influencing conflict management among construction professionals in both China and Canada. The next chapter reviews literature on conflict management among construction professionals in Nigeria.
CHAPTER FIVE
OVERVIEW OF CONFLICT MANAGEMENT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

5.0 INTRODUCTION
This chapter presents an overview of Nigeria, nature of the Nigerian construction industry, factors that cause conflict among professionals, impacts of construction professionals’ conflict on performance, methods of resolving conflict among construction, benefits of conflict resolution, and factors influencing conflict management in the Nigerian construction industry. Unrelated views of scholar and researchers on the study will also be reviewed.

5.1 OVERVIEW OF NIGERIA AS A COUNTRY
Nigeria is situated in West Africa (WA) with a population of 188,500,000. Abuja is the capital of Nigeria. Nigeria is recognized as a developing country, also as the richest country in the Africa. Between the 1500s and 1800s, many people from Nigeria with some other areas of West Africa were colonized and taken into slaves by the Europeans. Between 1901 and 1960 Nigeria was ruled by the United Kingdom. By 1960 the populace wanted their independence and it was granted by Britain. Some years back, Nigeria was an autocracy in which the influential were in control while the greater part of the citizens hated them. According to history, Nigeria experienced the Biafran War against the Christian Igbo natives who required their own independent country in the eastern part of the country. The Biafran War was concluded by means of a reunification with Nigeria. Back then in 1999, Nigeria was a democracy, in which citizens elected their leaders. Following that, Olusegun Obasanjo, from Yoruba area and a Christian from the southwest, was elected as the President. Nigeria as a country has an overall area of 923,768 km² (356,669 sq mi) and is referred to as the world's 32nd biggest country (CIA World Factbook, 210).
5.2 NATURE OF NIGERIAN CONSTRUCTION INDUSTRY
The construction industry in Nigeria is a substantial sector to the economy of the country. The industry has experienced a sustained development in the past five years. Also, in 2020 it has been forecast to develop into the fastest-rising construction industry globally. Mbamaji and Okotie (2012) described Nigeria as a emerging nation whose construction industry is static, facing numerous issues arising from insufficient technical equipment as well as supervisory work. It is an admirable marketplace to engage with. Corporate organizations concerned with construction and that are seeking innovative markets ought to consider Nigeria. Obviously, it means the Nigerian construction industry (NCI) is thriving. The construction industry in Nigeria is the nation’s second-highest employer of about 5% of workers in the construction field. Part of the advantages of this sector is growing rapidly in the aspects of profit firms which are capable to
build on construction projects. The normal profit margin on structure projects is between 25 and 30%, as in additional developed markets, and this hardly ever averages at higher than 20%. All these advantages of construction industry in Nigeria make it a great new market for associated business. The construction industry in Nigeria is dominated by foreign firms where most of the construction projects are being carried out by emigrants; this is because of insufficiencies as well as the inability of the indigenous firms in terms of economic efficiency, innovations and vitality among others (Odediran, 2012:256). An enormous amount of these foremost construction companies in Nigeria are associates of European, North American and Asian construction companies. Though, private clients, particularly individuals, award construction contracts to indigenous construction companies. The decision for involving foreign contractors as compared with other local companies is mainly owing to the lack of technical capability, lack of administrative skills as well as lack of organization. Others reasons comprises of pitiable monetary organization and adaptations to current revolutions among others (Enhassi, Mohammed, Mayer and Abed, 2007).

5.3 FACTORS THAT CAUSE CONFLICT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

The causes of conflict among professionals, according to Olalekan (2013) are differences in belief, orientation, opinions, and views, which is not different from what majority of researchers have revealed on other aspects of life. Olalekan (2013) observed conflict as the disagreement that occurs among professionals, which frequently arises from diverse opinions, inadequate communication and not possessing the right players in leading positions as the utmost causes of conflict. Hotepo et al (2010) states that the absence of resources, different expectations, absence of collaboration, interdependence and communication issues are factors that have caused conflicts among professionals. Obasan (2011) recognized improper terms of work, poor human relations, poor decision making, and absence of active mechanism for avoiding conflict as numerous causative factors of workplace conflict.

Osabiya (2015) revealed some factors that cause conflict which are elaborated as follows:

5.3.1 Differences in level of education
Conflict occurs among construction professionals due to diversities in the level of education. This factor that causes conflict among the construction professionals may be different in individual professionals’ conditions, learning and employment skill (Osabiya, 2015).

5.3.2 Differences in professionals’ values

The differences in values are the foundation of each Nigerian construction professional’s individuality which influence professionals’ and dealings. These diversities of value are frequently a cause of conflict among Nigerian professionals as well as behaviour in a proper relationship in the construction industry (Bingham, 2004).

5.3.3 Difference in Personal traits/behaviour

In the Nigerian construction industry, professionals are different in terms of behaviour such as stubbornness, violence, hatred, confidence, response to annoyance, tendency to disbelieve and doubt. Hampton (1986) distinguishes each professional’s qualities as a cause of conflict in working groups when they assert that most of us know professionals who seem to struggle with other professionals.

5.3.4 Difference in professional opinions

The Nigerian construction professionals possess diverse perceptions as conflicting situation, which is one of the main cause of interpersonal or inter-group conflict. Moreover, divergent ambitions and opinions might lead to dissimilarity in awareness among professionals in the construction industry (Osabiya, 2015).

5.3.5 Poor communication skills among construction professionals

Odine (2015: 617) describes communication problems as inevitable among professionals in the construction industry, or whenever professionals interact with one another. Moreover, construction professionals have different communication skills and capabilities and so simple disagreements can cause conflict which may escalate among the professionals which from the inability to clarify one’s situation to others in the construction industry. Hall (2002) recognized communication as one of the notable factors causing conflict, which usually causes many issues such as failure to comprehend each professional’s responsibilities.

5.3.6 High dependency on other professionals’ work
This is a cause of conflict whereby the construction professionals in Nigeria depend on other colleagues in executing or carrying out their duties. Shaw et al (2000:261) described task interdependences as the plans of work in the professionals’ workplace according to which members work together as well as depending on each other to achieve their tasks. However, sharing out work frequently generates a situation in which two or more must depend on one another to be done with their respective tasks: this creates interdependence among construction professionals.

5.3.7 Differences in professional goals

(Saiti, 2015) refers differences in goals as situations whereby the achievement of goals by one professional prevents the probable achievement of goals by others, which usually leads to conflict. It might be a problem of opinion. Conflict can occur if the professionals in the Nigerian construction industry recognize that only one goal can be accomplished and that there is less probability for the others’ goals to be achieved.

5.4 IMPACTS OF CONSTRUCTION PROFESSIONALS’ CONFLICT ON PERFORMANCE IN THE NIGERIAN CONSTRUCTION INDUSTRY

Conflicts in the minds of individual’s Nigerian construction professionals are considered as destructive on the basis of confrontation which delays the successful achievement of their goal. Conflicts do have destructive impacts on construction professionals but they also have some constructive impacts as well: it depends on the features of the conflicts. At times construction professionals use conflicts to accomplish a maximum phase of improvement in the construction industry and effective decision making. Constructive conflicts lead to active decision making commonly in task-oriented conflicts and improve the construction professionals’ performance due to the beneficial condemnation (Kehinde, 2011). A well-managed conflict inspires productive performance, while conflict that is not managed appropriately leads to a reduction in productivity as well as job performance (Akanji, 2005). This suggests that a well-managed conflict enhances the development of construction professionals’ firms in order to motivate performance in the work-situation. Whenever conflict emerges among Nigerian professionals, it must be managed in an appropriate manner so that it has a constructive impact rather than a destructive impact on construction professionals’ performance. It has been perceived that if conflicts are not appropriately managed, they can cause work interruptions among professionals, lack of interest, and less working effort. Unmanaged conflict may carefully result in the removal of individual
professionals and leads to absence of aspiration to contribute in other activities within the construction industry (Hotepo, Asokere, Abdul-Azeez and Ajemunigbohur, 2010).

Omisore and Abiodun (2014:128) state that some of the impacts of conflicts in Nigerian construction are the following:

i. Conflict motivates construction professionals to carry out tasks effectively. A well-managed conflict usually enhances motivation among professionals in executing their work.

ii. Conflict elicits resourceful thinking among the professionals. Construction professionals’ benefits of the present-day are the result of the organizations’ management of conflict.

iii. Conflict inspires creativity: Some construction companies view conflict as an opportunity to ascertain creative solutions to problems among the construction professionals. It can motivate professionals to make suggestions while investigating issues from different perspectives in the construction.

iv. Conflict enhances future communication: Conflict in the construction industry can bring professionals together and facilitate them to be taught more concerning each other. Moreover, the knowledge of another’s view on matters related to construction industry leads to understanding each professional’s goals.

v. Conflict affects individual professionals’ and organizational performance: The resolution of conflict takes managerial time as well as energy which can be more effectively used (Omisore & Abiodun 2014: 128).

5.5 METHODS OF RESOLVING CONFLICT AMONGST PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

Usoro et al (2014:142) identified some major methods by means of which conflict can be resolved such as avoidance, an accommodating/smoothing approach, a competitive approach, a collaborative approach, and a compromising/conciliation approach.

5.5.1 Avoiding

Construction professionals who use this method want the conflict to phase out on its own through indecision as well as unresponsiveness. This conflict resolution method is regularly used
when the professionals are not worry about their own consequences or that of others (Goldfien & Robbenmolt, 2007). The avoiding method has the benefit of giving time to plan and gather evidence before reacting. It is a low-tension method, suitable whenever the conflict time is short. However, withdrawing can result in weakening or dropping of the construction professional’s position as it can be taken as settlement, which can make issues worse. The avoidance method is indifferent to the concerns of both construction professionals. This method replicates a withdrawal from or abandon of any construction professional’s interests in other professionals (Kinnander, 2011:6).

5.5.2 Accommodating or smoothing

This method is usually used when construction professionals are strong-minded about fulfilling the desires of others and having a common concern for keeping calm a sustaining constructive affairs and coordination (Forsyth, 2009). It sometimes improves the well-being of more significant interests while giving up on less significant ones, and offers the opportunity of reconsidering the situation from other areas.

5.5.3 Competitive/Contending

This method comprises the use of force to get construction professionals to agree the other professional’s opinion. This approach increases self-confidence and reduces responsiveness (that is concern for others). The construction professionals see conflict as a win or lose situation. The advantage of this method is that it offers a speedy solution to a conflict and improves self-confidence. Though, the deficiencies of this method are that it can intensify the conflict as well as the connection among construction professionals would be destructively affected. This method can need a great deal of resources and does not permit the conflicting construction professionals to take benefits of the strong points of the others. Kinnander (2011:7) states that the competitive method is the reflection of a wish to accomplish one construction professional’s ends at the expense of other professionals. This is referred to as domination. It is likewise signified to as win-lose orientation in the construction industry.

5.5.4 Collaborating/cooperative

The collaborating approach is used when the construction professionals are extremely concerned with both their own interests and the interest of others. This method perceives conflict as an inspired chance of which investment in time as well as professionals’ resources could find a win-
win solution (Forsyth, 2009). This collaborating method might need basic transformation as other probable substitutes in resolving the conflict. Decisions frequently take careful thought as well as analysis in the collaborating approach. The qualities of this method are that it pilots real problem solving, strengthens shared belief and respect among professionals, and offers a base for active future cooperation.

5.5.5 Compromising/ Conciliation

A compromising approach is used when conflicting construction professionals value equality and in doing so, expect common give-and-take communications. This method improves quicker problem resolution, decreases pressure as well as resistance till a win-win solution can be accomplished. Though, the approach could lead to a lose-lose circumstances if first demands are too excessive among construction professionals (Usoro et al, 2014:142).

5.6 BENEFITS OF CONFLICT RESOLUTION AMONG CONSTRUCTION PROFESSIONALS IN NIGERIA

5.6.1 Conflict resolution encourages teamwork

Conflict resolution inspires the collective working together of professionals in order to carry out tasks and it usually leads to high performance of professionals’ task. According to Agwu (2015:42), teamwork is referred to as a plan that has the possibility of enhancing the performance of individual professional in the construction industry, though it requires to be nurtured over time.

5.6.2 Conflict resolution reduces task ambiguity of professionals

Task ambiguity is described as the dissimilarity between the extent of information as well as knowledge required to perform the task (Larsen, 2003). The minimization of task uncertainty among construction professionals through conflict resolution helps professionals to perform their work efficiently.

5.6.3 Conflict resolution improves quality of decision making by professionals

According to Ojokuku and Sajuyigbe (2014:93), professionals involved in decision making has been recognized as a managerial approach for improving task performance by striving for shared goals among individual professionals. Moreover, the enhancement of decision making among
professionals through constructive conflict resolution normally leads to growth in the construction industry.

5.6.4 Conflict resolution improves workplace conflict management skills
Conflict management skills are required among the construction professionals in order to increase productivity. Conflict management involves obtaining skills connected to conflict resolution, self-responsiveness regarding conflict manners, conflict communication ability, as well as founding an organization for deciding conflict in the environment. It is a procedure that holds all communicated approaches and involvements in regulating the growth of conflict (Usoro et al., 2014:139).

5.7 FACTOR INFLUENCING CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS IN NIGERIA
Cotae (2012) stated some of the factors affecting conflict management as the following:

5.7.1 High stress levels among professionals
According to Treven and Treven, (2010:249) stress is a condition whereby a professional is force to adjust into a new place of conditions. Moreover, the Nigerian professionals in the construction industry sometime experience stress owing to many circumstances. However, the outcome of stress is regularly a decrease in productivity with regard to construction professionals’ ambitions.

5.7.2 Time pressure
According to Cotae (2012), an increase in time pressure upon construction professionals’ performance is a complex issue that intensifies the tendency of conflict among the professionals in the construction industry. Thomas et al (2010) refer to conflict emerges owing to time pressures on the professionals. However, time pressure is a serious issue which influences conflict management among construction professionals.

5.7.3 Professionals’ personality type
According to Mukhtar and Habib (2010), personality type offers the concerning feature among the Nigerian professionals. The relation emphasis to the end that each professional possesses
different qualities which embrace another way to conflict and conflict management in the construction industry (Mukhtar & Habib, 2010: 305). However, the personality type of professionals usually influence the way conflict is been managed in the Nigerian construction industry.

5.8 LESSON LEARNT
From the literature, it was revealed that conflict in the thinking of individual construction professionals is considered as a destructive influence which delays the successful achievement of their goals. Conflict has destructive impacts on construction professionals but it likewise has some constructive impacts: it depends on the characteristics of the conflicts. At times construction professionals use conflict to achieve a maximum level of performance in the construction industry and resourceful decision making. Constructive conflicts leads to in active decision making, mostly in task-oriented conflicts and improve the construction professionals’ performance due to the beneficial condemnation.

Furthermore, the contending method as one of the techniques of resolving conflict is described as the method which comprises the application of force to get construction professionals to admit the other professionals’ opinions. It was learnt that this contenting method increases self-confidence and reduces responsiveness (that is concern for others). The advantage of this method is that it offers a speedy resolution to a conflict and improves confidence. Though, the negative outcomes of this approach are that it could intensify the conflict as well as the connection among construction professionals would be destructively affected. This method might need a lot of resources and does not permit the conflict construction professionals to take advantage of the strong points of the others. Also, collaborating approach as part of methods of resolving conflict is describes as a method when the construction professionals are extremely concerned in both their own interests and the interest of others. This method perceives conflict as an encouraged chance of which investment in time and professionals resources could seek a win-win solution.

5.9 CONCLUSION
This chapter focuses on an overview of Nigeria as a country and also the nature of the Nigerian construction industry. Factors that cause conflict among construction professionals in Nigeria were identified to be differences in level of education, differences in opinion, difference in personal traits/behaviour, favouritism, differences in value, role ambiguity and communication
problems. As part of the impacts of construction professionals’ conflict on performance, it was revealed that a well-managed conflict inspires creativity because some construction industries sees conflict as a chance to determine creative resolutions to issues in the construction industry. The literature showed that contending and collaborating methods are among the methods of resolving conflict among professionals in Nigeria. It was likewise revealed the conflict resolution inspires the working together of professionals in order to carry out tasks. It usually also leads to high performance of professionals’ task. Factors influencing conflict management among construction professionals were also revealed. The next chapter discusses the research methodology used in this study.
CHAPTER SIX
RESEARCH METHODOLOGY AND DESIGN

6.0 CHAPTER INTRODUCTION
This chapter discusses various techniques adopted for conducting this study. It discusses the rationale for the study, the research design, geographical area, pilot study, target population, samples, data collection instrument, data analysis with the methods that were used to uphold validity and reliability of the study instruments. Finally, the ethical issues were discussed in this particular chapter.

6.1 RATIONALE FOR THE STUDY
The rationale of this research is to add to the body of understanding on conflict management among professionals in the construction industry by exploring various factors causing conflicts as well as the impacts of construction professional conflict on performance, methods of resolving conflicts, the benefits of conflict resolution and finally, the factors influencing conflict management among construction professionals.

6.2 RESEARCH APPROACH AND DESIGN
According to Brink and Wood (1998:100), the purpose of a research design is to plan a strategy for giving responses to the identified research questions. It is a detailed plan that provides the numerous strategies used by the researcher to achieve exact, official and objective data. Burns and Grove (2005) describe quantitative research as an official, objective and general process to clarify and assess relationships and effects among the variables to be examined. A quantitative research approach was used for this study to examine factors causing conflict among construction professionals in Nigeria, to evaluate the impacts of construction professionals’ conflict on performance, to assess methods of resolving conflict, to assess the benefits of conflict resolution among construction professionals and to examine the factors influencing conflict management among construction professionals. According to Polit and Hungler (1994), quantitative research is an official as well as unbiased way of gaining information from a sample of people through self-reporting. The respondents’ offer some answers to questions sent to them by the researcher. This study collected information from several professionals in the Nigerian construction industry through a well-structured questionnaire which was sent out by the researcher. The quantitative survey technique was further adopted because in a relatively short
period, a large portion of the sample population in the certain research area could be adequately covered. This approach further makes use of a standard research design and fixed procedures which makes it possible to be replicated (De Vos et al, 2004:81; Ledwaba 2012: 21).

According to Yin (2014), a research design might be descriptive, exploratory or explanatory. A descriptive study was used in this study since it offers an accurate account of the characteristics such as the perceptions, behaviours, belief, capabilities and understanding of a circumstance or group. This technique was chosen as to achieve the study objectives. These were to investigate factors that cause conflict among construction professionals in Nigeria, to assess the impacts of construction professionals’ conflict on performance, to evaluate methods of resolving conflicts, to assess the benefits of conflicts resolution and to examine factors influencing conflict management among construction professionals in Nigeria.

6.3 RESEARCH AREA
This particular study was carried out in Ondo state and Lagos state (south-western part of Nigeria). South-west (SW) in Nigeria is one of the six geopolitical zone. Lagos state its capital in Ikeja. Lagos state is the nation largest urban area in Nigeria. It is a major financial centre and there are many construction companies in Lagos states. Ondo state has its capital situated at Akure, which is situated in the tropical rainforest zone in Nigeria. Construction professionals who work in governments ministries and own private firms were targeted. The construction professionals comprised quantity surveyors, architects, civil engineers builders, construction managers and project managers in Ondo state and Lagos state.

6.4 PILOT STUDY
According to Dahlberg and McCaig (2010:181), one of the significant aspects of questionnaire design is piloting. The questionnaire used in conducting this research was piloted with construction professionals to ensure the appropriateness of the selected research instrument. Neuman (2000:166) states that conducting a pilot study of questionnaire can intensify the reliability of the study. A total of five questionnaires were piloted.
6.5 TARGET POPULATION
Burns and Grove (1993: 779) describe populations as the overall people with similar features and are of concern to the researchers in meeting the standard for inclusion in the study. This study population comprises quantity surveyors, architects, civil engineers, project managers, construction managers and builders within the south-western part of Nigeria. The construction professionals were chosen since they have an adequate level of understanding and experience to contribute to the objectives of this study. This was achieved with the use of a well-structured questionnaire sent to the professionals in the Nigerian construction industry.

6.6 SAMPLE
According to Lotham (2007:7), sampling is the method of choosing a distinctive part of a population (sample) for determining features of the whole population. There are two groups of sampling methods which are probability sampling and purposive random sampling (Teddlie & Yu, 2007:77). This study made use of random sampling. Because random sampling provides all the respondents the same opportunity to be chosen for the study with equal criteria, this encouraged the study to use this method. The criteria for this study had to be professionals in the Nigerian construction industry. This technique is frequently used when the target population gives equal features, or the sampling size is excessively large to signify the whole population effectively and every participant of the whole population has the same opportunity of being chosen as a sampling respondent.

6.7 DATA COLLECTION
Regarding the assertion of Omran et al (2011:60), data collection stage is vital in achieving the objectives of this study, because it involves gathering all the required information from the important sources. The data used for this study was collected through primary and secondary sources of data collection. The primary data collected for this study was done by administering well-structured questionnaires which is mostly used for quantitative research (McDaniel & Gate, 2012). However, the secondary data was gotten by making use of current literatures published in conference papers, government reports as well as journal articles. Kumar (2011:31) stated that reviewing literature increases the knowledge base of the researcher and helps in integrating the results or findings with the existing body of knowledge.
After the questionnaires had been approved by the supervisor for data collection of this study, a list of appropriate respondents was produced. The questionnaire was then presented in Google forms format and distributed to the respondents online by emailing the questionnaire links. Once each questionnaire had been completed by the respondents, there was a confirmation message received which indicated that the questionnaire had been filled in appropriately. A total of 135 questionnaires were gotten back from the participants.

6.8 INSTRUMENT OF DATA COLLECTION
Burns and Groove (1993:368) describe a questionnaire as a self-report from which information is obtained which can be acquired through responses of the subject. Questionnaires were used in this study as a way of data collection instrument. The questionnaire was structured to assess causes, impacts, benefits in resolving conflict, methods of resolving conflict, and factors influencing conflicts management within the South-western part of Nigeria.

Additionally, the type of questionnaires used is close-ended-question. In close-ended questions, the participants were provided options related to the research scope which had been decided by the researcher, but in an open-ended questionnaire, the participants are given the chance to provide more details as they wish by responding in their own written words (Burns & Groove 1993:368). The research study used a close-ended questionnaire since it is easier to respond to and also to obtain trustworthy responses. The questionnaire was also designed in English since the whole participants are professionals. In this study, 150 questionnaires were administered.

The following are the six sections of the questionnaire:

i. **Section A**: Background information

   ii. **Section B**: Factors that cause conflict among construction professionals in the Nigerian construction industry

   iii. **Section C**: Impacts of construction professionals’ conflict on performance in the Nigerian construction industry

   iv. **Section D**: Methods of resolving conflict among construction professionals in the Nigerian construction industry

   v. **Section E**: Benefits of conflict resolution among construction professionals in the Nigerian construction industry
vi. **Section F**: Factors influencing conflict management among construction professionals in the Nigerian construction industry.

Out of one hundred and fifty (150) questionnaires that were sent out through Google Forms to various construction professionals in Nigeria, one thirty hundred and thirty five (135) were filled in and returned, which represents a 90% response rate.

These form the basis of this research as shown in the table 6.1 below. The following number was considered acceptable according to the statement by Moser and Kalton (1971) that the results of a survey can be considered as biased if the returns were lower than 40%.

**Table 6.1 Questionnaire Survey**

<table>
<thead>
<tr>
<th>Survey responses</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires sent out</td>
<td>150</td>
</tr>
<tr>
<td>Questionnaires received back</td>
<td>135</td>
</tr>
<tr>
<td>Useable questionnaires</td>
<td>135</td>
</tr>
<tr>
<td>Useable response rate</td>
<td>90%</td>
</tr>
</tbody>
</table>

The research data that was collected underwent cleaning and screening before the commencement of the analysis. The analysis of the frequency for the raw data was performed with the use of Statistical Package for Social Sciences (SPSS).

**6.9 PERIOD OF DATA COLLECTION**

The data of this study was collected by the researcher in the months of October and November, 2018.

**6.10 DATA ANALYSIS**

The analytical approach is essential to analyze the study data and subsequently result in the research conclusion (Tellis, 1997; Mofokeng 2012). The data of this study was analyzed with the use of quantitative techniques which were broken down into the following:
6.10.1 Mean item score

Mean item score (MIS) was used to present the findings for Likert questions in this study. The mean item score was calculated from the sum of all weighted responses on specific aspect. It was grounded on the assertion that participants scores on the whole selected standards deliberated collectively are the empirically decided indices of relative importance. However, the MIS index of a specific is the sum of participants real scores (using 5-point Likert scale) specified by every participants as a proportion of the totality of every of the higher likely scores on the 5-point Likert scale that all the participants might contribute to that standard. Weighting was allocated to every answer starting from one to five for the responses of ‘To no extent’ to ‘To a very large extent’. This is shown mathematically below. The MIS index was calculated for every item as follows:

\[
\text{MIS} = \frac{1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5}{\sum N} \quad \text{Equation 1.0}
\]

where

\[
\begin{align*}
n_1 & = \text{Number of respondents for ‘To no extent’} \\
n_2 & = \text{Number of respondents for ‘To a little extent’} \\
n_3 & = \text{Number of respondents for ‘To a moderate extent’} \\
n_4 & = \text{Number of respondents for ‘To a large extent’} \\
n_5 & = \text{Number of respondents for ‘To a very large extent’} \\
N & = \text{Total number of respondents}
\end{align*}
\]

After mathematical computations, the standards were ranked in descending order of their mean items scores (from the highest to the lowest).

6.10.2 Exploratory factors analysis

The second part of the analysis was the exploratory factor analysis (EFA). In this research, the EFA was done to collect information about the uni-dimensionality of the factors in order to yield their factor analyzability (Pallant, 2010). The EFA was used to confirm the reliability and validity of the assessment of the factors that cause conflict among construction professionals, the
impacts of construction professionals’ conflict on performance, methods of resolving conflict among construction professionals, the benefits of conflict resolution and factors influencing conflict management among construction professionals in Nigeria. The maximum likelihood with an eigenvalue over one together with Oblimin rotation was specified as the analysis method for this research. The EFA was adopted using SPSS version 21.

Factor analysis is dissimilar from other methods, such as regression. It is not scheduled to test hypothesis to determine whether a group is essentially different from another. It takes a bigger group of variables and looks for a method by which the data may be minimized or reduced using a smaller set of factors or components. It does this by looking for clumps or groups amongst the inter-correlations of set variables (Pallant, 2010).

Factor analysis consists of two foremost methods such as exploratory and confirmatory. Exploratory factor analysis (EFA) is regularly adopted in the initial steps of research to obtain information about the interrelationships amongst a set of variables. While confirmatory factor analysis is a more composite as well as classy set of methods adopted later in the research procedure to test (confirm) particular hypothesis or theories regarding the structure underlying a set of variables. The word factor analysis includes a diversity of different, even though related methods. One of the major differences is between what is called principal component analysis (PCA) and factor analysis (FA). In this research, an EFA was adopted as the major aim of this research was to collect information about the interrelationship amongst variables set (Pallant, 2010).

6.10.3 Validity

When distributing the questionnaire and asking for the consent of the construction professionals, the researcher explained the research deliverables, and then left the questionnaire, to be submitted at a later date. This was done to protect the rights of the respondents. In order to make this study ethical, the rights to self-purpose, anonymity, confidentiality as well as knowledgeable consent were recognized. In addition, a written letter of authorization to carry out this research was gotten from the University of Johannesburg, Department of Construction Management and Quantity Surveying, Dornfontein campus and was attached to the questionnaire.
6.10.4 Reliability

After developing the content validity and preliminary data analysis, empirical and theoretical reliabilities tests were run. Scale reliability is the correlation between two scores starting from 0 to 1.00 whereby the Cronbach’s alpha is the commonest form of internal consistency reliability coefficient. The commonly agreed upon lower limit for alpha is 0.70; however, values above 0.8 are preferable (Pallant, 2010). The adopted cut-off alpha for this study was 0.70 and measures below 0.70 were eliminated. This is adopted because in Connewlly’s (2011) study it was discovered that some of the scales was less than 0.7, hence the mean inter-item correlation was reported, and the suggested range for the inter-item correlation is 0.2- 0.4 (Briggs & Cheek, 1988). The extraction method used for the data was the principal axis factoring. The data were grouped into two types of factor analysis, namely the first order factor analysis and second order factor analysis. For the first order factor analysis the rotation method is Varimax rotation, and for the second order factor analysis, the Oblimin rotation method was used.

6.10.5 Non-parametric tests

After EFA, the researcher then took further steps to test the hypothesis. The parametric tests make assumptions pertaining the population from which the sample was drawn (Pallant, 2010:213). The key assumptions this test looks at are additively and linearity, normality of something or other, homoscedasticity/homogeneity of variance and independence (Field, 2013:165). For this study, normality assumption was adopted.

Non-parametric tests do not make assumptions pertaining the fundamental population distribution. They are ideal when small samples are used and do not meet the severe assumption of the parametric methods (Pallant, 2010:213).

6.10.6 Normality tests

The sample size upsets a study’s findings where the result of lesser samples has too minor statistical power for the test to accurately recognize important results (Hair et al, 1998). They can also be easily over-fitting to the study data that they fit the sample appropriately but yet have no generalizability. The sample size that are more than 200-400 respondents, on the other hand, have disadvantages due to making the statistical tests overly sensitive as a result of the bigger
statistical influence from the sample size (Hair et al 1998) which the data can incur non-normality.

Moreover, the sample size for this study was small; the data collected was analyzed for normality in order to confirm its suitability by means of standard multivariate analysis. Normality of data can be inspected with the use of statistical approaches such as skewness and kurtosis, Kolmogorov-Smirnov tests, graphical approaches such as histograms and box plots (Pallant, 2010). The variable’s frequency value distribution must approximate the bell-shaped curve or a straight diagonal line to attain normality of the data (Field, 2013; Pallant 2010). The skewness and kurtosis was adopted for this study and it recognized that the data was non-normal.

6.11 ETHICAL CONSIDERATION

According to Ledwaba (2012) and Homan (1991:148), ethical considerations are significant in the field of research study in protecting and guaranteeing the integrity of the researcher. The current study did not encounter any ethical problems. However, the ethical considerations for this study took into account the responsibilities to the professionals in the industry whose work had added to the literature and that this was appropriately cited. The obligations to the construction professionals who participated in the research questionnaire were that their feedback was to be kept confidential and simply adopted for academic purposes.

A written cover letter of approval to conduct this study was gotten from the University of Johannesburg, Department of Construction Management and Quantity Surveying, Dornfontein campus and it was attached to the questionnaires that were administered. Anonymity and confidentiality were preserved during the course of this study. Anonymity is a circumstance whereby the participants or respondents cannot be linked, even by the researchers, to their different responses (Burns & Grove, 1993).

6.12 CONCLUSION

This particular chapter deliberated on the research methodology that was adopted for this study. It comprises the population, sample, data collection instruments as well as strategies adopted to guarantee ethical standards and likewise reasons why questionnaires were adopted for the research. The next chapter of this study presents the data analysis and a discussion of the findings.
CHAPTER SEVEN
DATA ANALYSIS AND INTERPRETATION

7.1 INTRODUCTION
This chapter discusses the data analysis and interpretations of research findings. Data for the study were received through structured questionnaires administered to the following: architects, quantity surveyor, builders, construction managers, project manager and civil engineers working in the Nigerian construction industry. The data analysis and the interpretation of the findings were gotten from the questionnaire study and acted as the foundation of this quantitative data collection. The questionnaire comprises nine questions which were answered. The analysis was based on the 135 questionnaires received out of the 150 questionnaires that were sent.

7.2 SECTION A: BIOGRAPHICAL DATA ANALYSIS
This section presents background information of the respondents regarding to their demographics, namely age group, professional qualifications, years of experience, highest educational qualification, respondents’ incidences (number) of conflicts experienced with other professionals and respondents’ intensity of conflicts experienced with other professionals.

7.2.1 Respondents’ professions
Figure 7.1 below reveals respondents’ professions. It was revealed that 24.4% were quantity surveyors by profession, 17.8% were civil engineers by profession, 17.0% of the respondents were builders by profession, 14.8% of the total respondents were architects by profession, 13.3% were project managers by profession, and 12.6% were construction managers by profession.
7.2.2 Respondents’ age groups

Figure 7.2 below shows the respondents’ age groups. This reveals that 19.3% of the respondents’ population were from 51-55 years, 17.0% of the respondents were from 46-50 years, 14.1% of the respondents were from 41-45 years, 13.3% of respondents were between 26 to 30 years, 12.6% of the respondents population were from 56 years above, 9.6% of the respondents were between 31 and 35 years, 7.4% of the respondents were between 36 and 40 years, and 6.7% of the respondents were in the age group of 21 to 25 years,
7.2.3 Respondents’ years of experience

Figure 7.3 below shows the respondents’ years of experience. This reveals that 31.9% of the respondents has 11-15 years of experience in the construction industry. Likewise, 31.9% of the respondents has 20 years above of experience, 20.0% of the respondents has 1-5 years of experience, and 16.3% of the respondents has 6-10 years of experience in the construction industry,
Figure 7.3: Respondents’ years of experience

7.2.4 Respondents’ educational qualification

Figure 7.4 below shows the respondents educational qualifications. This reveals that 39.3% of the respondents have master’s degree, 33.3% of the respondents have bachelor degree holders, 20.7% of the respondents have a higher national diploma (HND), 3.7% of the respondents have doctorate and 3.0% of the respondents have an ordinary national diploma (OND).
Figure 7.4: Respondents’ educational qualifications

7.2.5 Respondents’ incidences (number) of conflict experienced with other professionals

Figure 7.5 shows the respondents’ number of incidences of conflict with other professionals in the construction industry. This reveals that 42.2% of respondents have experienced a considerable number of (high) incidences of conflict with others, 37.0% of respondents have experienced a moderate number of incidences of conflict with other construction professionals. A total of 8.1% of respondents have experienced (very low) incidences of conflict with other professionals. Likewise, 8.1% respondents have experienced a great deal of (Very high) of conflict with other construction professionals and 1.5% of respondents have experienced no incidences of conflict with other construction professionals. However, 3.0% of respondents have experienced a few (low) incidences of conflict with other professionals in the construction industry.
7.2.6 Respondents intensity of conflict experienced with other professionals

Figure 7.6 shows the respondents’ intensity of conflict experienced with other professionals in the construction industry. This reveals that 37.7% of the respondents have experienced incidents of conflict of high intensity with other professionals, and 31.1% of respondents have experienced incidents of conflict of moderate intensity with other professionals. However, 12.6% of the respondents have experienced incidents of conflict of very high intensity with other construction professionals, and 10.4% of the respondent’s population has experienced incidents of conflict of low intensity with other professionals in the construction industry. While 5.9% of the respondents have experienced incidents of very low intensity of conflict with other professionals. Lastly, 2.2% of the respondents have experienced no conflict with other construction professionals.
7.3 SECTION B: FACTORS THAT CAUSE CONFLICT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

This section reveals the results of the questions from Section B of the questionnaire, which shows various factors that cause conflict among professionals in the Nigerian construction industry. The mean items score of the variables and exploratory factor analysis results are presented. The results of all the descriptive analysis show the ranking of every factor in descending order. The descriptive analysis table also shows the individual mean scores as well as the standard deviation of every factor.

7.3.1 Results from descriptive analysis

Table 7.1 below reveals respondents’ rankings from the highest to the lowest according to the factors that cause conflict among professionals in the construction industry. According to the respondents, ‘favouritism’ among professionals was ranked first with a mean score (M) of 4.01 and standard deviation of (SD) of 1.103; ‘role ambiguity’ was ranked second with (M= 3.96; SD =1.105); ‘differences in professionals’ experiences was ranked third with (M= 3.93; SD
‘differences in level of education’ was ranked fourth with (Μ = 3.90; SD = 1.253); ‘differences in personalities’ was ranked fifth with (Μ = 3.87; SD = 1.098); ‘differences in professionals’ goals and views’ was ranked sixth with (Μ = 3.84; SD = 1.112). In addition, ‘poor decision making of professionals’ was ranked seventh with (Μ = 3.79; SD = 0.978); ‘indiscipline’ among professionals’ was ranked eighth with (Μ = 3.57; SD = 1.062); ‘lack of coordination among professionals’ was ranked ninth with (Μ = 3.50; SD = 0.897); ‘poor dissemination of information’ was ranked ninth with (Μ = 3.50; SD = 0.897) and ‘change order over tasks among professionals’ was ranked tenth with (Μ = 3.46; SD = 0.976); Furthermore, ‘high dependency on other professionals’ was ranked eleventh with (Μ = 3.34; SD = 0.865); ‘inappropriate administrative style of professionals’ was ranked twelfth with a (Μ = 3.28; SD = 0.895); ‘financial problems of professionals’ was ranked fourteenth with (Μ = 3.27; SD = 1.024); and finally, ‘poor working conditions’ was ranked fifteenth with (Μ = 3.21; SD = 0.995).

Table 7.1: Factors that cause conflict among construction professionals

<table>
<thead>
<tr>
<th>Factors that causes conflicts among construction professionals</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favouritism among professionals</td>
<td>4.01</td>
<td>1.103</td>
<td>1</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>3.96</td>
<td>1.105</td>
<td>2</td>
</tr>
<tr>
<td>Differences in professional experiences</td>
<td>3.93</td>
<td>1.167</td>
<td>3</td>
</tr>
<tr>
<td>Differences in level of education</td>
<td>3.90</td>
<td>1.253</td>
<td>4</td>
</tr>
<tr>
<td>Differences in personalities</td>
<td>3.87</td>
<td>1.098</td>
<td>5</td>
</tr>
<tr>
<td>Differences in professional goals and views</td>
<td>3.84</td>
<td>1.112</td>
<td>6</td>
</tr>
<tr>
<td>Poor decision making of professionals</td>
<td>3.79</td>
<td>0.978</td>
<td>7</td>
</tr>
<tr>
<td>Indiscipline among professionals</td>
<td>3.57</td>
<td>1.062</td>
<td>8</td>
</tr>
<tr>
<td>Lack of coordination among the professionals</td>
<td>3.50</td>
<td>0.897</td>
<td>9</td>
</tr>
<tr>
<td>Poor dissemination of information</td>
<td>3.50</td>
<td>0.897</td>
<td>9</td>
</tr>
<tr>
<td>Change order over tasks among professionals</td>
<td>3.46</td>
<td>0.976</td>
<td>10</td>
</tr>
<tr>
<td>High dependency on other professionals’ work</td>
<td>3.34</td>
<td>0.865</td>
<td>11</td>
</tr>
<tr>
<td>Inappropriate administrative style of professionals</td>
<td>3.28</td>
<td>0.895</td>
<td>12</td>
</tr>
<tr>
<td>Financial problems of professionals</td>
<td>3.27</td>
<td>1.024</td>
<td>13</td>
</tr>
<tr>
<td>Poor working conditions</td>
<td>3.21</td>
<td>0.995</td>
<td>14</td>
</tr>
</tbody>
</table>

7.3.2 Results from exploratory factor analysis

The EFA results on the factors that cause conflict among professionals in the Nigerian construction industry are depicted in tables 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, and figure 7.7.
Table 7.2 shows the identified factors causing conflict among construction professionals with a total of fifteen variables outlined. None of the variables were omitted.

**Table 7.2: Definition of the all the identified causes of conflict among construction professionals**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC1</td>
<td>Indiscipline among professionals</td>
</tr>
<tr>
<td>FCC2</td>
<td>Differences in professionals goals and view</td>
</tr>
<tr>
<td>FCC3</td>
<td>Differences in personalities</td>
</tr>
<tr>
<td>FCC4</td>
<td>Poor working conditions</td>
</tr>
<tr>
<td>FCC5</td>
<td>Poor dissemination of information</td>
</tr>
<tr>
<td>FCC6</td>
<td>Inappropriate administration style of professionals</td>
</tr>
<tr>
<td>FCC7</td>
<td>Favouritism among professionals</td>
</tr>
<tr>
<td>FCC8</td>
<td>Differences in levels of education</td>
</tr>
<tr>
<td>FCC9</td>
<td>Change order over tasks</td>
</tr>
<tr>
<td>FCC10</td>
<td>Lack of coordination among the professionals</td>
</tr>
<tr>
<td>FCC11</td>
<td>Poor decision making of professionals</td>
</tr>
<tr>
<td>FCC12</td>
<td>Financial problems of professionals</td>
</tr>
<tr>
<td>FCC13</td>
<td>Difference in professionals’ experience</td>
</tr>
<tr>
<td>FCC14</td>
<td>High dependency on other professionals’ works</td>
</tr>
<tr>
<td>FCC15</td>
<td>Role ambiguity</td>
</tr>
</tbody>
</table>

Before performing the principal component analysis (PCA), the evaluation for the suitability of the data for factor analysis (FA) was analyzed. The correlation matrix table shows that the presence values above 0.3 as represented in table 7.3.
Table 7.3: Correlation matrix of factor analysis

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC1</td>
<td><strong>1.000</strong></td>
<td>0.550</td>
<td>0.552</td>
<td>0.406</td>
<td>0.280</td>
<td>0.277</td>
<td>0.462</td>
<td>0.600</td>
<td>0.307</td>
<td>0.260</td>
<td>0.460</td>
<td>0.058</td>
<td>0.471</td>
<td>0.453</td>
<td>0.486</td>
</tr>
<tr>
<td>FCC2</td>
<td>0.550</td>
<td><strong>1.000</strong></td>
<td>0.618</td>
<td>0.469</td>
<td>0.190</td>
<td>0.307</td>
<td>0.512</td>
<td>0.599</td>
<td>0.486</td>
<td>0.356</td>
<td>0.560</td>
<td>0.260</td>
<td>0.653</td>
<td>0.614</td>
<td>0.601</td>
</tr>
<tr>
<td>FCC3</td>
<td>0.552</td>
<td>0.618</td>
<td><strong>1.000</strong></td>
<td>0.470</td>
<td>0.295</td>
<td>0.388</td>
<td>0.531</td>
<td>0.527</td>
<td>0.399</td>
<td>0.379</td>
<td>0.537</td>
<td>0.258</td>
<td>0.599</td>
<td>0.551</td>
<td>0.548</td>
</tr>
<tr>
<td>FCC4</td>
<td>0.406</td>
<td>0.469</td>
<td>0.470</td>
<td><strong>1.000</strong></td>
<td>0.398</td>
<td>0.468</td>
<td>0.338</td>
<td>0.383</td>
<td>0.566</td>
<td>0.555</td>
<td>0.544</td>
<td>0.405</td>
<td>0.424</td>
<td>0.521</td>
<td>0.429</td>
</tr>
<tr>
<td>FCC5</td>
<td>0.280</td>
<td>0.190</td>
<td>0.295</td>
<td>0.398</td>
<td><strong>1.000</strong></td>
<td>0.466</td>
<td>0.253</td>
<td>0.186</td>
<td>0.446</td>
<td>0.494</td>
<td>0.399</td>
<td>0.188</td>
<td>0.189</td>
<td>0.223</td>
<td>0.309</td>
</tr>
<tr>
<td>FCC6</td>
<td>0.277</td>
<td>0.307</td>
<td>0.388</td>
<td>0.468</td>
<td>0.466</td>
<td><strong>1.000</strong></td>
<td>0.429</td>
<td>0.232</td>
<td>0.620</td>
<td>0.557</td>
<td>0.562</td>
<td>0.325</td>
<td>0.361</td>
<td>0.531</td>
<td>0.382</td>
</tr>
<tr>
<td>FCC7</td>
<td>0.462</td>
<td>0.512</td>
<td>0.531</td>
<td>0.338</td>
<td>0.253</td>
<td>0.429</td>
<td><strong>1.000</strong></td>
<td>0.578</td>
<td>0.593</td>
<td>0.434</td>
<td>0.569</td>
<td>0.276</td>
<td>0.644</td>
<td>0.615</td>
<td>0.655</td>
</tr>
<tr>
<td>FCC8</td>
<td>0.600</td>
<td>0.599</td>
<td>0.527</td>
<td>0.383</td>
<td>0.186</td>
<td>0.232</td>
<td>0.578</td>
<td><strong>1.000</strong></td>
<td>0.405</td>
<td>0.286</td>
<td>0.536</td>
<td>0.278</td>
<td>0.679</td>
<td>0.549</td>
<td>0.681</td>
</tr>
<tr>
<td>FCC9</td>
<td>0.307</td>
<td>0.486</td>
<td>0.399</td>
<td>0.566</td>
<td>0.446</td>
<td>0.620</td>
<td>0.593</td>
<td>0.405</td>
<td><strong>1.000</strong></td>
<td>0.595</td>
<td>0.695</td>
<td>0.415</td>
<td>0.552</td>
<td>0.591</td>
<td>0.476</td>
</tr>
<tr>
<td>FCC10</td>
<td>0.260</td>
<td>0.356</td>
<td>0.379</td>
<td>0.555</td>
<td>0.494</td>
<td>0.557</td>
<td>0.434</td>
<td>0.286</td>
<td>0.595</td>
<td><strong>1.000</strong></td>
<td>0.614</td>
<td>0.365</td>
<td>0.439</td>
<td>0.450</td>
<td>0.429</td>
</tr>
<tr>
<td>FCC11</td>
<td>0.460</td>
<td>0.560</td>
<td>0.537</td>
<td>0.544</td>
<td>0.399</td>
<td>0.562</td>
<td>0.569</td>
<td>0.536</td>
<td>0.695</td>
<td>0.614</td>
<td><strong>1.000</strong></td>
<td>0.346</td>
<td>0.589</td>
<td>0.622</td>
<td>0.606</td>
</tr>
<tr>
<td>FCC12</td>
<td>0.058</td>
<td>0.260</td>
<td>0.258</td>
<td>0.405</td>
<td>0.188</td>
<td>0.325</td>
<td>0.276</td>
<td>0.278</td>
<td>0.415</td>
<td>0.365</td>
<td>0.346</td>
<td><strong>1.000</strong></td>
<td>0.371</td>
<td>0.436</td>
<td>0.327</td>
</tr>
<tr>
<td>FCC13</td>
<td>0.471</td>
<td>0.653</td>
<td>0.599</td>
<td>0.424</td>
<td>0.189</td>
<td>0.361</td>
<td>0.644</td>
<td>0.679</td>
<td>0.552</td>
<td>0.439</td>
<td>0.589</td>
<td>0.371</td>
<td><strong>1.000</strong></td>
<td>0.666</td>
<td>0.571</td>
</tr>
<tr>
<td>FCC14</td>
<td>0.453</td>
<td>0.614</td>
<td>0.551</td>
<td>0.521</td>
<td>0.223</td>
<td>0.531</td>
<td>0.615</td>
<td>0.549</td>
<td>0.591</td>
<td>0.450</td>
<td>0.622</td>
<td>0.436</td>
<td>0.666</td>
<td><strong>1.000</strong></td>
<td>0.601</td>
</tr>
<tr>
<td>FCC15</td>
<td>0.486</td>
<td>0.601</td>
<td>0.548</td>
<td>0.429</td>
<td>0.309</td>
<td>0.382</td>
<td>0.655</td>
<td>0.681</td>
<td>0.476</td>
<td>0.429</td>
<td>0.606</td>
<td>0.327</td>
<td>0.571</td>
<td>0.601</td>
<td><strong>1.000</strong></td>
</tr>
</tbody>
</table>
Table 7.4 shows that the KMO measure of sampling acceptability attained a value of 0.916. These have exceeded the maximum value of 0.6. This is considered acceptable to proceed factor analysis as any value above 0.6 is considered acceptable (Eiselen et al., 2005:107). Moreover, the Barlett’s test of sphericity was statistically significant (<0.05). This supported the factorability of the correlation matrix.

Table 7.4 KMO and Bartlett’s test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | 0.916 |
| Bartlett’s Test of Sphericity | Approx. Chi-Square | 1201.395 |
| Df | 105 |
| Sig. | 0.000 |

Table 7.5 reveals the communalities for variables. In the communalities table the various items after extraction should contain values above 0.3. Fortunately, the values as seen from the table 7.5 all consist of items greater than 0.3.

Table 7.5: Communalities

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC1</td>
<td>0.525</td>
<td>0.442</td>
</tr>
<tr>
<td>FCC2</td>
<td>0.607</td>
<td>0.619</td>
</tr>
<tr>
<td>FCC3</td>
<td>0.550</td>
<td>0.530</td>
</tr>
<tr>
<td>FCC4</td>
<td>0.523</td>
<td>0.484</td>
</tr>
<tr>
<td>FCC5</td>
<td>0.384</td>
<td>0.327</td>
</tr>
<tr>
<td>FCC6</td>
<td>0.531</td>
<td>0.568</td>
</tr>
<tr>
<td>FCC7</td>
<td>0.628</td>
<td>0.560</td>
</tr>
<tr>
<td>FCC8</td>
<td>0.661</td>
<td>0.693</td>
</tr>
<tr>
<td>FCC9</td>
<td>0.682</td>
<td>0.684</td>
</tr>
<tr>
<td>FCC10</td>
<td>0.549</td>
<td>0.608</td>
</tr>
<tr>
<td>FCC11</td>
<td>0.660</td>
<td>0.678</td>
</tr>
<tr>
<td>FCC12</td>
<td>0.321</td>
<td>0.328</td>
</tr>
<tr>
<td>FCC13</td>
<td>0.678</td>
<td>0.662</td>
</tr>
<tr>
<td>FCC14</td>
<td>0.647</td>
<td>0.628</td>
</tr>
<tr>
<td>FCC15</td>
<td>0.641</td>
<td>0.611</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring
The total variance explained in Table 7.6 shows the number of factors causing conflict among professionals in the Nigerian construction industry and their respective eigenvalues. The latent root or Kaiser’s criterion of retaining items with eigenvalues greater than 1.0 was employed. Hence, two clusters of factors with eigenvalue exceeding one (1) were retained. The following are the variance of each of the retained factor: factor 1 (7.550%) and factor 2 (1.632%). The final statistics of the extracted factors and PCA accounted for approximately 55% of the overall cumulative variance.

**Table 7.6 Total Variance Explained**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>7.550</td>
<td>50.335</td>
<td>50.335</td>
</tr>
<tr>
<td>2</td>
<td>1.632</td>
<td>10.882</td>
<td>61.217</td>
</tr>
<tr>
<td>3</td>
<td>0.996</td>
<td>6.640</td>
<td>67.857</td>
</tr>
<tr>
<td>4</td>
<td>0.728</td>
<td>4.855</td>
<td>72.712</td>
</tr>
<tr>
<td>5</td>
<td>0.614</td>
<td>4.091</td>
<td>76.802</td>
</tr>
<tr>
<td>6</td>
<td>0.515</td>
<td>3.434</td>
<td>80.236</td>
</tr>
<tr>
<td>7</td>
<td>0.472</td>
<td>3.145</td>
<td>83.381</td>
</tr>
<tr>
<td>8</td>
<td>0.420</td>
<td>2.801</td>
<td>86.183</td>
</tr>
<tr>
<td>9</td>
<td>0.401</td>
<td>2.672</td>
<td>88.855</td>
</tr>
<tr>
<td>10</td>
<td>0.367</td>
<td>2.450</td>
<td>91.305</td>
</tr>
<tr>
<td>11</td>
<td>0.332</td>
<td>2.215</td>
<td>93.520</td>
</tr>
<tr>
<td>12</td>
<td>0.319</td>
<td>2.125</td>
<td>95.645</td>
</tr>
<tr>
<td>13</td>
<td>0.281</td>
<td>1.874</td>
<td>97.518</td>
</tr>
<tr>
<td>14</td>
<td>0.193</td>
<td>1.289</td>
<td>98.807</td>
</tr>
<tr>
<td>15</td>
<td>0.179</td>
<td>1.193</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.

An inspection of the scree plot in figure 7.7 shows a break after the second factor. The steep slope reveals the large factor while the gradual trailing off displays the rest of the factors consist an eigenvalue lower than one. Two clusters of factors are located on the slope and they were retained.
Figure 7.7: Scree plot

Table 7.7 shows the pattern matrix which displays the factors loadings of each of the variables. The highest loading items on factors 1 and 2 were shown.

Table 7.7: Pattern matrix

<table>
<thead>
<tr>
<th>Pattern Matrixa</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC8 Differences in levels of education</td>
<td>0.926</td>
<td></td>
</tr>
<tr>
<td>FCC2 Differences in professional goals and views</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>FCC13 Differences in professional experiences</td>
<td>0.766</td>
<td></td>
</tr>
<tr>
<td>FCC15 Role ambiguity</td>
<td>0.704</td>
<td></td>
</tr>
<tr>
<td>FCC1 Indiscipline among professionals</td>
<td>0.700</td>
<td></td>
</tr>
<tr>
<td>FCC3 Differences in personalities</td>
<td>0.661</td>
<td></td>
</tr>
<tr>
<td>FCC7 Favouritism among professionals</td>
<td>0.625</td>
<td></td>
</tr>
<tr>
<td>FCC14 High dependency on other professionals’ work</td>
<td>0.577</td>
<td></td>
</tr>
<tr>
<td>FCC10 Lack of coordination among the professionals</td>
<td>0.790</td>
<td></td>
</tr>
<tr>
<td>FCC6 Inappropriate administrative style of professionals</td>
<td>0.778</td>
<td></td>
</tr>
<tr>
<td>FCC9 Change order over tasks among professionals</td>
<td>0.726</td>
<td></td>
</tr>
<tr>
<td>FCC5 Poor dissemination of information</td>
<td>0.624</td>
<td></td>
</tr>
<tr>
<td>FCC4 Poor working conditions</td>
<td>0.555</td>
<td></td>
</tr>
<tr>
<td>FCC11 Poor decision making of professionals</td>
<td>0.526</td>
<td></td>
</tr>
<tr>
<td>FCC12 Financial problems of professionals</td>
<td>0.404</td>
<td></td>
</tr>
</tbody>
</table>
Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

The principal axis factoring revealed the presence of two factors with eigenvalues above one (1) as shown in Table 7.6 above. Owing to careful observation of the inherent relationships among the variables under each factor, the following assessments were made. Factor one was described as **professionals’ attributes differences**; factor two was described as **professionals’ working conditions**. The termed used in describing the factors was obtained as a result of closely observing variables within each of the factors. The two factors retained and their constituents indicators are explained below, together with a comprehensive description on how to describe the two factor sections.

**Factor one: Professionals’ personalities differences**

A total of eight items loaded onto factor one. It is shown in table 7.7 that these items relate to professionals’ personality differences. This factor loaded as follows: differences in level of education (0.926), differences in professionals’ goals and views (0.789), differences in professionals’ experiences (0.766), role ambiguity (0.704), indiscipline among professionals (0.700), differences in personalities (0.661), favouritism among professionals (0.625), and high dependency on other professionals’ work (0.625), with a total variance of 47.582%. Percentages in parenthesis show the respective factors’ loadings.

**Factor two: Professionals’ working situations**

Seven factors loaded onto factor two. It is revealed from table 7.7 that these items relate to professionals’ working situations. This factor loaded as follows: lack of coordination among the professionals (0.790), inappropriate administrative style of professionals (0.778), change order over tasks among professionals (0.726), poor dissemination of information (0.624), poor working conditions (0.555), poor decision making of professionals (0.526), and financial problems of professionals (0.404) with a total variance of 7.900%. Percentages in parenthesis show the respective factors loadings.
7.4 SECTION C: IMPACTS OF CONSTRUCTION PROFESSIONALS CONFLICT ON THE PERFORMANCE IN THE NIGERIAN CONSTRUCTION INDUSTRY

Section C of the questionnaire determines the most impacts of construction professionals’ conflict on performance in the Nigerian construction industry. The mean item scores of the variables and exploratory factor analysis results are presented. The results of all the descriptive analysis show the ranking of every factor in descending order. The table also shows the individual mean scores as well as the standard deviation of every factor.

7.4.1 Results from descriptive analysis

Table 7.8 below reveals respondents’ rankings from the highest to the lowest according to the impacts of construction professionals’ conflict in the construction industry. According to the respondents, “conflict led to abandonment of professionals work” was ranked first with a mean score (M) of 3.90 and standard deviation (SD) of 1.25; “conflict reduced communication among construction professionals” was ranked second with (M= 3.85; SD =1.10); “conflict created job pressure” was ranked second; “conflict led to frustrations of professionals in carrying out their work” was ranked third with (M= 3.75; SD =1.10); “conflict created displeasure among professionals” was ranked fourth with (M= 3.74; SD =0.99); and “conflict helped professionals in early problem” identification was ranked fifth with (M=3.71; SD = 1.23). In addition, “conflict caused work damages among professionals” was ranked sixth with (M=3.62; SD =1.06); “conflict helped in solving professionals’ organization problems” was ranked seventh with (M=3.55; SD =1.12); “conflict improved productivity of professionals” was ranked eighth with (M= 3.53; SD =1.30); “conflict improved communication among the professionals” was ranked ninth with (M=3.53; SD =1.24); “conflict destroyed emotional well-being of professionals” was also ranked ninth with (M= 3.53; SD =1.01) and “conflict affected professionals morale” was ranked tenth with a (M=3.46; SD =1.03). Furthermore, “conflict enhanced resourceful thoughts of professionals” was ranked twelfth with (M= 3.41; SD=1.05); “conflicts create climate of mistrust among professionals” was ranked thirteenth with (M=3.37; SD = 0.97); “conflict increased resistance to transformation among professionals” was ranked fourteenth with a (M= 3.36; SD= 3.34); “conflict brought ideas for innovation among professionals” was ranked fifteenth with (M=3.17; SD =1.07); “conflict enhanced creativity among professionals was ranked sixteenth with (M=3.17; SD=1.07) and finally, “conflict created better trust among the professionals” was ranked seventeenth with (M=2.84; SD=1.02).
Table 7.8: Impacts of construction professionals’ conflict on performance

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict leads to abandonment of professionals’ work</td>
<td>3.90</td>
<td>1.25</td>
<td>1</td>
</tr>
<tr>
<td>Conflict reduces communication among construction professionals</td>
<td>3.85</td>
<td>1.10</td>
<td>2</td>
</tr>
<tr>
<td>Conflict creates job pressure</td>
<td>3.85</td>
<td>1.21</td>
<td>2</td>
</tr>
<tr>
<td>Conflict leads to frustrations of professionals in carrying out their work</td>
<td>3.75</td>
<td>1.10</td>
<td>3</td>
</tr>
<tr>
<td>Conflict creates displeasure among professionals</td>
<td>3.74</td>
<td>0.99</td>
<td>4</td>
</tr>
<tr>
<td>Conflict helps in early problem identification</td>
<td>3.71</td>
<td>1.23</td>
<td>5</td>
</tr>
<tr>
<td>Conflict causes work damage among professionals</td>
<td>3.62</td>
<td>1.06</td>
<td>6</td>
</tr>
<tr>
<td>Conflict helps in solving professional organisation problems</td>
<td>3.55</td>
<td>1.12</td>
<td>7</td>
</tr>
<tr>
<td>Conflict improves productivity of professionals</td>
<td>3.53</td>
<td>1.30</td>
<td>8</td>
</tr>
<tr>
<td>Conflict improves communication among the professionals</td>
<td>3.53</td>
<td>1.24</td>
<td>9</td>
</tr>
<tr>
<td>Conflict destroys emotional well-being of professionals</td>
<td>3.53</td>
<td>1.01</td>
<td>9</td>
</tr>
<tr>
<td>Conflict affects professional morale</td>
<td>3.47</td>
<td>0.98</td>
<td>10</td>
</tr>
<tr>
<td>Conflict helps professionals to share opinions</td>
<td>3.46</td>
<td>1.03</td>
<td>11</td>
</tr>
<tr>
<td>Conflict enhances resourceful thoughts of professionals</td>
<td>3.41</td>
<td>1.05</td>
<td>12</td>
</tr>
<tr>
<td>Conflict creates climate of mistrust among the professionals</td>
<td>3.37</td>
<td>0.97</td>
<td>13</td>
</tr>
<tr>
<td>Conflict increases resistance to transformation among professionals</td>
<td>3.36</td>
<td>0.95</td>
<td>14</td>
</tr>
<tr>
<td>Conflict produces ideas for innovation among professionals</td>
<td>3.34</td>
<td>0.89</td>
<td>15</td>
</tr>
<tr>
<td>Conflict enhances creativity among professionals</td>
<td>3.17</td>
<td>1.07</td>
<td>16</td>
</tr>
<tr>
<td>Conflict creates better trust among the professionals</td>
<td>2.84</td>
<td>1.02</td>
<td>17</td>
</tr>
</tbody>
</table>

7.4.2 Results from the exploratory factor analysis

The EFA results on the impacts of construction professionals’ conflicts on performance in the Nigerian construction industry are reflected in tables 7.9, 7.10, 7.11, 7.12, 7.13, 7.14 and in figure 7.8.

Table 7.9 shows all the identified impacts of construction professionals’ conflict on performance with total of nineteenth variables outlined: no variable was omitted.
Table 7.9: Definition of identified impacts of construction professionals’ conflict on performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICP1</td>
<td>Conflict creates better trust among the professionals</td>
</tr>
<tr>
<td>ICP2</td>
<td>Conflict improves productivity of professionals</td>
</tr>
<tr>
<td>ICP3</td>
<td>Conflict enhances creativity among professionals</td>
</tr>
<tr>
<td>ICP4</td>
<td>Conflict enhances resourceful thoughts of professionals</td>
</tr>
<tr>
<td>ICP5</td>
<td>Conflict helps professionals to share opinions</td>
</tr>
<tr>
<td>ICP6</td>
<td>Conflict improves communication among the professionals</td>
</tr>
<tr>
<td>ICP7</td>
<td>Conflict elicits ideas for innovation among professionals</td>
</tr>
<tr>
<td>ICP8</td>
<td>Conflict helps in early problem identification</td>
</tr>
<tr>
<td>ICP9</td>
<td>Conflict helps in solving professional organisational problems</td>
</tr>
<tr>
<td>ICP10</td>
<td>Conflict creates job pressure</td>
</tr>
<tr>
<td>ICP11</td>
<td>Conflict creates displeasure among professionals</td>
</tr>
<tr>
<td>ICP12</td>
<td>Conflict reduces communication among construction professionals</td>
</tr>
<tr>
<td>ICP13</td>
<td>Conflict increases resistance to transformation among professionals</td>
</tr>
<tr>
<td>ICP14</td>
<td>Conflict affects professionals organisation commitment</td>
</tr>
<tr>
<td>ICP15</td>
<td>Conflict leads to abandonment of professionals’ work</td>
</tr>
<tr>
<td>ICP16</td>
<td>Conflict leads to frustrations of professionals in carrying out their work</td>
</tr>
<tr>
<td>ICP17</td>
<td>Conflict causes work damages among professionals</td>
</tr>
<tr>
<td>ICP18</td>
<td>Conflict affects professionals morale</td>
</tr>
<tr>
<td>ICP19</td>
<td>Conflict destroys emotional well-being of professionals</td>
</tr>
</tbody>
</table>

Prior to performing the principal component analysis (PCA), the evaluation of the suitability of the data for factor analysis (FA) was analyzed. The correlation matrix table reveals the presence of values above 0.3 as shown in the table 7.10.
<table>
<thead>
<tr>
<th>Correlation</th>
<th>ICP1</th>
<th>ICP2</th>
<th>ICP3</th>
<th>ICP4</th>
<th>ICP5</th>
<th>ICP6</th>
<th>ICP7</th>
<th>ICP8</th>
<th>ICP9</th>
<th>ICP10</th>
<th>ICP11</th>
<th>ICP12</th>
<th>ICP13</th>
<th>ICP14</th>
<th>ICP15</th>
<th>ICP16</th>
<th>ICP17</th>
<th>ICP18</th>
<th>ICP19</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICP1</td>
<td>1.000</td>
<td>0.660</td>
<td>0.519</td>
<td>0.494</td>
<td>0.591</td>
<td>0.618</td>
<td>0.442</td>
<td>0.548</td>
<td>0.507</td>
<td>0.499</td>
<td>0.387</td>
<td>0.389</td>
<td>0.215</td>
<td>0.159</td>
<td>0.541</td>
<td>0.364</td>
<td>0.389</td>
<td>0.287</td>
<td>0.333</td>
</tr>
<tr>
<td>ICP2</td>
<td>0.660</td>
<td>1.000</td>
<td>0.724</td>
<td>0.694</td>
<td>0.629</td>
<td>0.678</td>
<td>0.550</td>
<td>0.667</td>
<td>0.604</td>
<td>0.601</td>
<td>0.405</td>
<td>0.542</td>
<td>0.327</td>
<td>0.359</td>
<td>0.639</td>
<td>0.573</td>
<td>0.491</td>
<td>0.390</td>
<td>0.413</td>
</tr>
<tr>
<td>ICP3</td>
<td>0.519</td>
<td>0.724</td>
<td>1.000</td>
<td>0.619</td>
<td>0.597</td>
<td>0.574</td>
<td>0.457</td>
<td>0.635</td>
<td>0.540</td>
<td>0.516</td>
<td>0.244</td>
<td>0.382</td>
<td>0.302</td>
<td>0.189</td>
<td>0.428</td>
<td>0.421</td>
<td>0.285</td>
<td>0.392</td>
<td>0.317</td>
</tr>
<tr>
<td>ICP4</td>
<td>0.494</td>
<td>0.694</td>
<td>0.619</td>
<td>1.000</td>
<td>0.555</td>
<td>0.531</td>
<td>0.537</td>
<td>0.573</td>
<td>0.532</td>
<td>0.564</td>
<td>0.287</td>
<td>0.453</td>
<td>0.269</td>
<td>0.301</td>
<td>0.534</td>
<td>0.532</td>
<td>0.402</td>
<td>0.365</td>
<td>0.354</td>
</tr>
<tr>
<td>ICP5</td>
<td>0.591</td>
<td>0.629</td>
<td>0.597</td>
<td>0.555</td>
<td>1.000</td>
<td>0.664</td>
<td>0.575</td>
<td>0.604</td>
<td>0.543</td>
<td>0.470</td>
<td>0.347</td>
<td>0.367</td>
<td>0.322</td>
<td>0.231</td>
<td>0.501</td>
<td>0.344</td>
<td>0.339</td>
<td>0.317</td>
<td>0.284</td>
</tr>
<tr>
<td>ICP6</td>
<td>0.618</td>
<td>0.678</td>
<td>0.574</td>
<td>0.531</td>
<td>0.664</td>
<td>1.000</td>
<td>0.639</td>
<td>0.629</td>
<td>0.635</td>
<td>0.532</td>
<td>0.427</td>
<td>0.383</td>
<td>0.274</td>
<td>0.248</td>
<td>0.565</td>
<td>0.405</td>
<td>0.347</td>
<td>0.275</td>
<td>0.273</td>
</tr>
<tr>
<td>ICP7</td>
<td>0.442</td>
<td>0.550</td>
<td>0.457</td>
<td>0.537</td>
<td>0.575</td>
<td>0.639</td>
<td>1.000</td>
<td>0.573</td>
<td>0.529</td>
<td>0.498</td>
<td>0.310</td>
<td>0.279</td>
<td>0.244</td>
<td>0.282</td>
<td>0.458</td>
<td>0.393</td>
<td>0.271</td>
<td>0.191</td>
<td>0.267</td>
</tr>
<tr>
<td>ICP8</td>
<td>0.548</td>
<td>0.667</td>
<td>0.635</td>
<td>0.573</td>
<td>0.604</td>
<td>0.629</td>
<td>0.573</td>
<td>1.000</td>
<td>0.689</td>
<td>0.630</td>
<td>0.511</td>
<td>0.436</td>
<td>0.332</td>
<td>0.381</td>
<td>0.654</td>
<td>0.553</td>
<td>0.517</td>
<td>0.412</td>
<td>0.511</td>
</tr>
<tr>
<td>ICP9</td>
<td>0.507</td>
<td>0.604</td>
<td>0.540</td>
<td>0.532</td>
<td>0.543</td>
<td>0.635</td>
<td>0.529</td>
<td>0.689</td>
<td>1.000</td>
<td>0.546</td>
<td>0.419</td>
<td>0.368</td>
<td>0.296</td>
<td>0.296</td>
<td>0.588</td>
<td>0.449</td>
<td>0.421</td>
<td>0.337</td>
<td>0.464</td>
</tr>
<tr>
<td>ICP10</td>
<td>0.499</td>
<td>0.601</td>
<td>0.516</td>
<td>0.564</td>
<td>0.470</td>
<td>0.532</td>
<td>0.498</td>
<td>0.630</td>
<td>0.546</td>
<td>1.000</td>
<td>0.629</td>
<td>0.591</td>
<td>0.435</td>
<td>0.464</td>
<td>0.602</td>
<td>0.626</td>
<td>0.519</td>
<td>0.445</td>
<td>0.500</td>
</tr>
<tr>
<td>ICP11</td>
<td>0.387</td>
<td>0.405</td>
<td>0.244</td>
<td>0.287</td>
<td>0.347</td>
<td>0.427</td>
<td>0.310</td>
<td>0.511</td>
<td>0.419</td>
<td>0.629</td>
<td>1.000</td>
<td>0.611</td>
<td>0.627</td>
<td>0.594</td>
<td>0.590</td>
<td>0.627</td>
<td>0.597</td>
<td>0.526</td>
<td>0.637</td>
</tr>
<tr>
<td>ICP12</td>
<td>0.389</td>
<td>0.542</td>
<td>0.382</td>
<td>0.453</td>
<td>0.367</td>
<td>0.383</td>
<td>0.279</td>
<td>0.436</td>
<td>0.368</td>
<td>0.591</td>
<td>0.611</td>
<td>1.000</td>
<td>0.619</td>
<td>0.544</td>
<td>0.644</td>
<td>0.621</td>
<td>0.635</td>
<td>0.598</td>
<td>0.517</td>
</tr>
<tr>
<td>ICP13</td>
<td>0.215</td>
<td>0.327</td>
<td>0.302</td>
<td>0.269</td>
<td>0.322</td>
<td>0.274</td>
<td>0.244</td>
<td>0.332</td>
<td>0.296</td>
<td>0.435</td>
<td>0.627</td>
<td>0.619</td>
<td>1.000</td>
<td>0.578</td>
<td>0.474</td>
<td>0.471</td>
<td>0.565</td>
<td>0.485</td>
<td>0.528</td>
</tr>
<tr>
<td>ICP14</td>
<td>0.159</td>
<td>0.359</td>
<td>0.189</td>
<td>0.301</td>
<td>0.231</td>
<td>0.248</td>
<td>0.282</td>
<td>0.381</td>
<td>0.296</td>
<td>0.464</td>
<td>0.594</td>
<td>0.544</td>
<td>0.578</td>
<td>1.000</td>
<td>0.571</td>
<td>0.599</td>
<td>0.633</td>
<td>0.456</td>
<td>0.569</td>
</tr>
<tr>
<td>ICP15</td>
<td>0.541</td>
<td>0.639</td>
<td>0.428</td>
<td>0.534</td>
<td>0.501</td>
<td>0.565</td>
<td>0.458</td>
<td>0.654</td>
<td>0.588</td>
<td>0.602</td>
<td>0.590</td>
<td>0.644</td>
<td>0.474</td>
<td>0.571</td>
<td>1.000</td>
<td>0.715</td>
<td>0.679</td>
<td>0.566</td>
<td>0.670</td>
</tr>
<tr>
<td>ICP16</td>
<td>0.364</td>
<td>0.573</td>
<td>0.421</td>
<td>0.532</td>
<td>0.344</td>
<td>0.405</td>
<td>0.393</td>
<td>0.553</td>
<td>0.449</td>
<td>0.626</td>
<td>0.627</td>
<td>0.621</td>
<td>0.471</td>
<td>0.599</td>
<td>0.715</td>
<td>1.000</td>
<td>0.712</td>
<td>0.598</td>
<td>0.612</td>
</tr>
<tr>
<td>ICP17</td>
<td>0.389</td>
<td>0.491</td>
<td>0.285</td>
<td>0.402</td>
<td>0.339</td>
<td>0.347</td>
<td>0.271</td>
<td>0.517</td>
<td>0.421</td>
<td>0.519</td>
<td>0.597</td>
<td>0.635</td>
<td>0.565</td>
<td>0.633</td>
<td>0.679</td>
<td>0.712</td>
<td>1.000</td>
<td>0.605</td>
<td>0.641</td>
</tr>
<tr>
<td>ICP18</td>
<td>0.287</td>
<td>0.390</td>
<td>0.392</td>
<td>0.365</td>
<td>0.317</td>
<td>0.275</td>
<td>0.191</td>
<td>0.412</td>
<td>0.337</td>
<td>0.445</td>
<td>0.526</td>
<td>0.598</td>
<td>0.485</td>
<td>0.456</td>
<td>0.566</td>
<td>0.598</td>
<td>0.605</td>
<td>1.000</td>
<td>0.603</td>
</tr>
<tr>
<td>ICP19</td>
<td>0.333</td>
<td>0.413</td>
<td>0.317</td>
<td>0.354</td>
<td>0.284</td>
<td>0.273</td>
<td>0.267</td>
<td>0.511</td>
<td>0.464</td>
<td>0.500</td>
<td>0.637</td>
<td>0.517</td>
<td>0.528</td>
<td>0.569</td>
<td>0.670</td>
<td>0.612</td>
<td>0.641</td>
<td>0.603</td>
<td>1.000</td>
</tr>
</tbody>
</table>
As shown in the table 7.11, the KMO measure of sampling acceptability attained a value of 0.929: this has exceeded the maximum value of 0.6. This is considered as acceptable to proceed to factor analysis as any value above 0.6 is considered acceptable (Eiselen et al, 2005:107). Moreover, the Barlett’s test of sphericity was statistically significant (<0.05). This has supported the factorability of the correlation matrix.

**Table 7.11 KMO and Bartlett’s Test**

<table>
<thead>
<tr>
<th></th>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>Bartlett’s Test of Sphericity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.929</td>
<td>Approx. Chi-Square: 1780.681</td>
</tr>
<tr>
<td></td>
<td></td>
<td>df: 171</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig.: 0.000</td>
</tr>
</tbody>
</table>

Table 7.12 shows the communalities table. In the communalities table, every item after extraction should contain values above 0.3. The values as seen from the table 7.12, all consist of items greater than 0.3.

**Table 7.12: Communalities**

<table>
<thead>
<tr>
<th>Item</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICP1 Conflict creates better trust among the professionals</td>
<td>0.579</td>
<td>0.514</td>
</tr>
<tr>
<td>ICP2 Conflict improves productivity of professionals</td>
<td>0.760</td>
<td>0.747</td>
</tr>
<tr>
<td>ICP3 Conflict enhances creativity among professionals</td>
<td>0.700</td>
<td>0.573</td>
</tr>
<tr>
<td>ICP4 Conflict enhances resourceful thoughts of professionals</td>
<td>0.596</td>
<td>0.552</td>
</tr>
<tr>
<td>ICP5 Conflict helps professionals to share opinions</td>
<td>0.597</td>
<td>0.595</td>
</tr>
<tr>
<td>ICP6 Conflict improves communication among the professionals</td>
<td>0.687</td>
<td>0.672</td>
</tr>
<tr>
<td>ICP7 Conflict produces ideas for innovation among professionals</td>
<td>0.541</td>
<td>0.485</td>
</tr>
<tr>
<td>ICP8 Conflict helps in early problem identification</td>
<td>0.703</td>
<td>0.676</td>
</tr>
<tr>
<td>ICP9 Conflict helps in solving professional organisation problems</td>
<td>0.586</td>
<td>0.558</td>
</tr>
<tr>
<td>ICP10 Conflict creates job pressure</td>
<td>0.633</td>
<td>0.595</td>
</tr>
<tr>
<td>ICP11 Conflict creates displeasure among professionals</td>
<td>0.717</td>
<td>0.625</td>
</tr>
<tr>
<td>ICP12 Conflict reduces communication among construction professionals</td>
<td>0.653</td>
<td>0.606</td>
</tr>
<tr>
<td>ICP13 Conflict creates climate of mistrust among the professionals</td>
<td>0.589</td>
<td>0.491</td>
</tr>
</tbody>
</table>
ICP14 Conflict increases resistance to transformation among professionals 0.574 0.566
ICP15 Conflict leads to abandonment of professionals’ work 0.753 0.717
ICP16 Conflict leads to frustrations of professionals in carrying out their work 0.716 0.673
ICP17 Conflict causes work damage among professionals 0.692 0.686
ICP18 Conflict affects professional morale 0.556 0.500
ICP19 Conflict destroys emotional well-being of professionals 0.646 0.605

Extraction Method: Principal Axis Factoring.

The total variance explained in Table 7.13 shows the impact of construction professionals’ conflict on performance in Nigeria and their eigenvalues. The latent root or Kaiser’s criterion of retaining factors with eigenvalues greater than 1.0 was employed. However, only two factors were retained in table 7.13. The variance of the extracted factor 1 is (51.505%) and finally factor 2 (12.860%). The final statistics of the extracted factors and PCA account for approximately 60% of the overall cumulative variance.

**Table 7.13: Total variance explained**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>9.786</td>
<td>51.505</td>
<td>51.505</td>
</tr>
<tr>
<td>2</td>
<td>2.443</td>
<td>12.860</td>
<td>64.365</td>
</tr>
<tr>
<td>3</td>
<td>0.809</td>
<td>4.259</td>
<td>68.623</td>
</tr>
<tr>
<td>4</td>
<td>0.717</td>
<td>3.776</td>
<td>72.399</td>
</tr>
<tr>
<td>5</td>
<td>0.680</td>
<td>3.578</td>
<td>75.977</td>
</tr>
<tr>
<td>6</td>
<td>0.596</td>
<td>3.138</td>
<td>79.115</td>
</tr>
<tr>
<td>7</td>
<td>0.527</td>
<td>2.774</td>
<td>81.889</td>
</tr>
<tr>
<td>8</td>
<td>0.450</td>
<td>2.366</td>
<td>84.255</td>
</tr>
<tr>
<td>9</td>
<td>0.396</td>
<td>2.083</td>
<td>86.338</td>
</tr>
<tr>
<td>10</td>
<td>0.380</td>
<td>2.002</td>
<td>88.340</td>
</tr>
<tr>
<td>11</td>
<td>0.340</td>
<td>1.787</td>
<td>90.128</td>
</tr>
<tr>
<td>12</td>
<td>0.317</td>
<td>1.667</td>
<td>91.794</td>
</tr>
<tr>
<td>13</td>
<td>0.296</td>
<td>1.559</td>
<td>93.354</td>
</tr>
<tr>
<td>14</td>
<td>0.285</td>
<td>1.502</td>
<td>94.856</td>
</tr>
<tr>
<td>15</td>
<td>0.243</td>
<td>1.279</td>
<td>96.135</td>
</tr>
</tbody>
</table>
The scree plot in figure 7.8 revealed a break after the second factor. The steep slope displays the large factor whereas the gradual trailing off reveals the rest of the factors that have an eigenvalue lower than one (1). Two clusters of factors are positioned on the slope and they were retained.

![Scree Plot](image)

**Figure 7.8: Scree plot**

Table 7.14 reveals the pattern matrix which displays the factors loadings of each of the variables. The highest loading items on factors 1 and 2 were shown.

**Table 7.14: Pattern matrix**

<table>
<thead>
<tr>
<th>Conflict improves communication among the professionals</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.859</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conflict helps professionals to share opinions</th>
<th>0.805</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Conflict improves productivity of professionals</th>
<th>0.805</th>
</tr>
</thead>
</table>
Conflict enhances creativity among professionals 0.787
Conflict produces ideas for innovation among professionals 0.727
Conflict creates better trust among the professionals 0.719
Conflict enhances resourceful thoughts of professionals 0.697
Conflict helps in early problem identification 0.695
Conflict helps in solving professional organisational problems 0.681
Conflict creates job pressure 0.826
Conflict causes work damage among professionals 0.821
Conflict increases resistance to transformation among professionals 0.819
Conflict destroys emotional well-being of professionals 0.776
Conflict creates displeasure among professionals 0.774
Conflict creates climate of mistrust among the professionals 0.738
Conflict reduces communication among construction professionals 0.716
Conflict leads to frustrations of professionals in carrying out their work 0.714
Conflict affects professional morale 0.697
Conflict leads to abandonment of professionals’ work 0.590

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.\(^a\)

The principal axis factoring revealed that two (2) factors were present with eigenvalues greater than one (1) as represented in the table 7.13 above. Owing to careful observation of the inherent relationships among the variables under each factor, the following assessments were made: Factor one was described as **Functional impacts**; factor two was described as **Dysfunctional impacts**. The terms used in describing the factors were obtained as a result of closely observing variables within each of the factors. The two factors were retained and their constituents’ indicators are explained below, together with a comprehensive description on how to describe the two factor sections.

**Factor one: Functional impacts**

A total of nine items were loaded onto factor one. Table 7.14 revealed that these items relate to functional impacts. This factor loaded as follows: ‘conflict improves communication among the
professionals’ (0.859), ‘conflict helps professionals to share opinions’ (0.805), ‘conflict improves productivity’ (0.805), ‘conflict enhances creativity among the professionals’ (0.787), ‘conflict produces ideas for innovation among professionals’ (0.727), ‘conflict creates better trust among the professionals’ (0.719), ‘conflict enhances resourceful thoughts of professionals’ (0.697), ‘conflict helps in early problem identification’ (0.695) and ‘conflict helps in solving professionals organisational problems’ (0.681), with a total variance of 49.476%. Percentages in parenthesis show the respective factor loadings.

**Factor two: Dysfunctional impacts**

Ten items were loaded onto factor two and these items relate to dysfunctional impacts. This factor loaded as follows: ‘conflict created job pressure’ (0.416), ‘conflict causes work damages among professionals’ (0.821), ‘conflict increases resistance to transformation among professionals’ (0.819), ‘conflict destroys emotional well-being of professionals’ (0.776), ‘conflict creates displeasure among professionals’ (0.774), ‘conflict creates climate of mistrust among the professionals’ (0.738), ‘conflict reduces communication among professionals’ (0.738), ‘conflict leads to frustrations of professionals in carrying out work’ (0.714), ‘conflict affects professional morale’ (0.697) and ‘conflict leads to abandonment of professionals’ work’ (0.590), with a total variance of 10.708%. The percentages in parenthesis show the respective factor loadings.

**7.5 SECTION D: METHODS OF RESOLVING CONSTRUCTION PROFESSIONALS’ CONFLICT IN NIGERIAN CONSTRUCTION INDUSTRY**

Section D of the questionnaire shows the results of the questionnaire which determines various methods of resolving conflict among construction professionals in Nigeria. The mean items scores of the variables and exploratory factor analysis results are presented. The results of all the descriptive analysis show the ranking of every factor in descending order. The table also shows the individual mean scores as well as the standard deviation of every factor.

**7.5.1 Results from descriptive analysis**

Table 7.15 shows the mean items scores from the highest to the lowest regarding the methods of resolving conflicts among construction professionals in Nigeria. According to the respondents, ‘collaborating’ was ranked first with a mean score (M) of 4.13 and standard deviation (SD) of
‘accommodating’ was ranked second with \( (M=3.93; \ SD =1.087) \); ‘negotiating’ was ranked second with \( (M=3.93; \ SD =1.005) \); ‘compromising among the professionals’ was ranked third with \( (M=3.72; \ SD=1.386) \); ‘mediating’ was ranked fourth with \( (M=3.63; \ SD=0.826) \); ‘arbitrating’ was ranked fifth with \( (M=3.60; \ SD =0.924) \). Furthermore, ‘mediating-arbitrating’ was ranked sixth with a \( (M=3.39; \ SD =0.946) \); ‘contending’ was ranked sixth with \( (M=3.39; \ SD = 1.044) \); ‘obliging’ was seventh with \( (M= 3.35; \ SD=0.692) \); ‘early neutral evaluating’ was ranked eighth with a mean score of 3.34 and SD of 0.932; ‘confronting’ was ranked ninth with \( (M= 3.24; \ SD =0.971) \); ‘avoiding’ was ranked tenth with \( (M= 3.16; \ SD = 1.073) \) and finally, ‘dominating’ was ranked eleventh with \( (M= 3.10; \ SD =1.205) \).

Table 7.15: Methods of resolving conflict among construction professionals

<table>
<thead>
<tr>
<th>Method</th>
<th>Mean ( (\bar{X}) )</th>
<th>Std. Deviation ( (\sigma_X) )</th>
<th>Rank (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborating</td>
<td>4.13</td>
<td>0.973</td>
<td>1</td>
</tr>
<tr>
<td>Accommodating</td>
<td>3.93</td>
<td>1.087</td>
<td>2</td>
</tr>
<tr>
<td>Negotiating</td>
<td>3.93</td>
<td>1.005</td>
<td>2</td>
</tr>
<tr>
<td>Compromising among the professionals</td>
<td>3.72</td>
<td>1.386</td>
<td>3</td>
</tr>
<tr>
<td>Mediating</td>
<td>3.63</td>
<td>0.826</td>
<td>4</td>
</tr>
<tr>
<td>Arbitrating</td>
<td>3.60</td>
<td>0.924</td>
<td>5</td>
</tr>
<tr>
<td>Mediating-arbitrating</td>
<td>3.39</td>
<td>0.946</td>
<td>6</td>
</tr>
<tr>
<td>Contending</td>
<td>3.39</td>
<td>1.044</td>
<td>6</td>
</tr>
<tr>
<td>Obliging</td>
<td>3.35</td>
<td>0.964</td>
<td>7</td>
</tr>
<tr>
<td>Early neutral evaluating</td>
<td>3.34</td>
<td>0.932</td>
<td>8</td>
</tr>
<tr>
<td>Confronting</td>
<td>3.24</td>
<td>0.971</td>
<td>9</td>
</tr>
<tr>
<td>Avoiding</td>
<td>3.16</td>
<td>1.073</td>
<td>10</td>
</tr>
<tr>
<td>Dominating</td>
<td>3.10</td>
<td>1.205</td>
<td>11</td>
</tr>
</tbody>
</table>

7.5.2 Results from the exploratory factor analysis

The EFA results on the methods of resolving conflicts among construction professionals in Nigerian construction are depicted in tables 7.16, 7.17, 7.18, 7.19, 7.20, 7.21, and figure 7.9. Table 7.16 presents all the identified methods of resolving conflict among construction professionals with a total of thirteen variables outlined; no variable was omitted.
Table 7.16: Definition of identified methods of resolving conflict among construction professionals

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRC1</td>
<td>Avoiding</td>
</tr>
<tr>
<td>MRC2</td>
<td>Contending</td>
</tr>
<tr>
<td>MRC3</td>
<td>Accommodating</td>
</tr>
<tr>
<td>MRC4</td>
<td>Negotiating</td>
</tr>
<tr>
<td>MRC5</td>
<td>Mediating</td>
</tr>
<tr>
<td>MRC6</td>
<td>Arbitrating</td>
</tr>
<tr>
<td>MRC7</td>
<td>Mediating-arbitrating</td>
</tr>
<tr>
<td>MRC8</td>
<td>Early neutral evaluating</td>
</tr>
<tr>
<td>MRC9</td>
<td>Obliging</td>
</tr>
<tr>
<td>MRC10</td>
<td>Dominating</td>
</tr>
<tr>
<td>MRC11</td>
<td>Compromising among the professionals</td>
</tr>
<tr>
<td>MRC12</td>
<td>Collaborating</td>
</tr>
<tr>
<td>MRC13</td>
<td>Confronting</td>
</tr>
</tbody>
</table>

Before carrying out the principal component analysis (PCA), the evaluation for the suitability of the data for factor analysis (FA) was analyzed. Assessing of the correlation matrix table shows the existence values above 0.3 as represented in table 7.17.

Table 7.17: Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MRC1</td>
<td><strong>1.00</strong></td>
<td>0.45</td>
<td>0.29</td>
<td>0.37</td>
<td>0.37</td>
<td>0.40</td>
<td>0.38</td>
<td>0.25</td>
<td>0.37</td>
<td>0.34</td>
<td>0.22</td>
<td>0.37</td>
<td>0.42</td>
</tr>
<tr>
<td>MRC2</td>
<td>0.45</td>
<td><strong>1.00</strong></td>
<td>0.60</td>
<td>0.41</td>
<td>0.33</td>
<td>0.39</td>
<td>0.33</td>
<td>0.27</td>
<td>0.46</td>
<td>0.56</td>
<td>0.59</td>
<td>0.59</td>
<td>0.47</td>
</tr>
</tbody>
</table>

119
As revealed in Table 7.18, the KMO measure of sampling acceptability attained a value of 0.876. This has exceeded the maximum value of 0.6. This is considered acceptable to proceeding to factor analysis as any value greater than 0.6 is considered acceptable (Eiselen et al., 2005:107). Moreover, the Barlett’s test of sphericity was statistically significant (<0.05). This has supported the factorability of the correlation matrix.

Table 7.18: KMO and Bartlett’s test

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
<th>Bartlett’s Test of Sphericity</th>
<th>Approx. Chi-Square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.876</td>
<td>938.377</td>
<td>78</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
Table 7.19 shows the communalities table. In the communalities table, every item after extraction should contain values above 0.3. Fortunately, the values as seen from the table 7.19 all consist of items greater than 0.3.

**Table 7.19: Communalities**

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRC1 Avoiding</td>
<td>0.413</td>
<td>0.371</td>
</tr>
<tr>
<td>MRC2 Contending</td>
<td>0.592</td>
<td>0.587</td>
</tr>
<tr>
<td>MRC3 Accommodating</td>
<td>0.560</td>
<td>0.451</td>
</tr>
<tr>
<td>MRC4 Negotiating</td>
<td>0.522</td>
<td>0.518</td>
</tr>
<tr>
<td>MRC5 Mediating</td>
<td>0.596</td>
<td>0.650</td>
</tr>
<tr>
<td>MRC6 Arbitrating</td>
<td>0.513</td>
<td>0.516</td>
</tr>
<tr>
<td>MRC7 Mediating-arbitrating</td>
<td>0.551</td>
<td>0.492</td>
</tr>
<tr>
<td>MRC8 Early neutral evaluating</td>
<td>0.400</td>
<td>0.391</td>
</tr>
<tr>
<td>MRC9 Obliging</td>
<td>0.611</td>
<td>0.538</td>
</tr>
<tr>
<td>MRC10 Dominating</td>
<td>0.545</td>
<td>0.610</td>
</tr>
<tr>
<td>MRC11 Compromising among the professionals</td>
<td>0.694</td>
<td>0.646</td>
</tr>
<tr>
<td>MRC12 Collaborating</td>
<td>0.694</td>
<td>0.658</td>
</tr>
<tr>
<td>MRC13 Confronting</td>
<td>0.543</td>
<td>0.497</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.

The total variance explained in Table 7.20 shows the methods of resolving conflict among construction professionals in the Nigerian construction industry and their respective eigenvalues. The latent root or Kaiser’s criterion of retaining factors with eigenvalues greater than 1.0 was adopted. Hence, two cluster factors with eigenvalues greater than 1 were retained. The following are the variances of each of the retained factors: factor 1 (49.214%) and factor 2 (10.201%). The final statistics of the extracted factors and PCA account for about 52% of the overall cumulative variance.

**Table 7.20: Total variance explained**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadingsa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>% of Cumulative</td>
<td>Total % of Cumulative</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Descr. Total</td>
<td>% of Cumulative</td>
</tr>
<tr>
<td></td>
<td>Variance</td>
<td>%</td>
<td>Variance</td>
</tr>
<tr>
<td>----</td>
<td>----------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>6.398</td>
<td>49.214</td>
<td>5.940</td>
</tr>
<tr>
<td>2</td>
<td>1.326</td>
<td>10.201</td>
<td>0.883</td>
</tr>
<tr>
<td>3</td>
<td>0.870</td>
<td>6.689</td>
<td>66.103</td>
</tr>
<tr>
<td>4</td>
<td>0.834</td>
<td>6.415</td>
<td>72.518</td>
</tr>
<tr>
<td>5</td>
<td>0.655</td>
<td>5.035</td>
<td>77.553</td>
</tr>
<tr>
<td>6</td>
<td>0.602</td>
<td>4.630</td>
<td>82.183</td>
</tr>
<tr>
<td>7</td>
<td>0.513</td>
<td>3.949</td>
<td>86.132</td>
</tr>
<tr>
<td>8</td>
<td>0.429</td>
<td>3.303</td>
<td>89.434</td>
</tr>
<tr>
<td>9</td>
<td>0.380</td>
<td>2.926</td>
<td>92.360</td>
</tr>
<tr>
<td>10</td>
<td>0.339</td>
<td>2.610</td>
<td>94.970</td>
</tr>
<tr>
<td>11</td>
<td>0.255</td>
<td>1.959</td>
<td>96.928</td>
</tr>
<tr>
<td>12</td>
<td>0.227</td>
<td>1.744</td>
<td>98.673</td>
</tr>
<tr>
<td>13</td>
<td>0.173</td>
<td>1.327</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.

The scree plot in figure 7.9 revealed a break after the second factor. The steep slope displays the large factor while the gradual trailing off displays the rest of the factors that have an eigenvalue lower than one (1). Two clusters of factor are positioned on the steep slope and they were retained.

![Scree Plot](image-url)

Figure 7.9: Scree plot
Table 7.21 shows the pattern matrix which displays the factor loadings of every of the variables. The highest loading items on factors 1 and 2 are shown.

**Table 7.21: Pattern matrix**

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRC5 Mediating</td>
<td>0.850</td>
<td></td>
</tr>
<tr>
<td>MRC6 Arbitrating</td>
<td>0.735</td>
<td></td>
</tr>
<tr>
<td>MRC4 Negotiating</td>
<td>0.669</td>
<td></td>
</tr>
<tr>
<td>MRC8 Early neutral evaluating</td>
<td>0.647</td>
<td></td>
</tr>
<tr>
<td>MRC7 Mediating-arbitrating</td>
<td>0.641</td>
<td></td>
</tr>
<tr>
<td>MRC9 Obliging</td>
<td>0.472</td>
<td></td>
</tr>
<tr>
<td>MRC1 Avoiding</td>
<td>0.328</td>
<td></td>
</tr>
<tr>
<td>MRC10 Dominating</td>
<td>0.882</td>
<td></td>
</tr>
<tr>
<td>MRC11 Compromising among the professionals</td>
<td>0.715</td>
<td></td>
</tr>
<tr>
<td>MRC13 Confronting</td>
<td>0.649</td>
<td></td>
</tr>
<tr>
<td>MRC12 Collaborating</td>
<td>0.550</td>
<td></td>
</tr>
<tr>
<td>MRC3 Accommodating</td>
<td>0.473</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 10 iterations.

The principal axis factoring revealed that two (2) factors were present with eigenvalues greater than one (1) as represented in the table 7.20. Owing to careful observation of the inherent relationships among the variables under each factor, the following assessments were made. Factor one was described as **mediating techniques** and factor two was described as **confronting techniques**. The terms used in describing the factors were obtained as a result of closely observing variables within each of the factors. Two factors were retained and their constituent indicators are explained below, together with a comprehensive description on how to describe the two factor sections.

**Factor one: Mediating techniques**
As shown in table 7.21, seven items loaded on factor one. The factor was named ‘mediating techniques’ owing to incorporation of the items. This factor loaded as follows: mediating (0.850), arbitrating (0.735), negotiating (0.669), early neutral evaluating (0.647), mediating-arbitrating (0.64.1), obliging (0.472), and avoiding (0.328), with a total variance of 45.695%. The percentage in parenthesis shows the respective factor loadings.

**Factor two: Confronting techniques**

A total of six items were loaded onto factor two, as shown in table 7.21. The factor was labelled ‘confronting techniques’ as a result of the relation between the items. The factor loads were as follows: dominating (0.882), contending (0.756), compromising among the professionals (0.715), confronting (0.649), collaborating (0.550) and accommodating (0.473), with a total variance of 6.789%. The percentage in parenthesis shows the individual factors loadings.

### 7.6 SECTION E: BENEFITS OF CONFLICT RESOLUTION AMONG CONSTRUCTION PROFESSIONALS IN NIGERIA

Section E of the questionnaire determines the most benefits of conflicts resolution among construction professionals in the Nigerian construction industry. The mean items scores of the variables and exploratory factor analysis results are presented. The results of all the descriptive analysis show the ranking of every factor in descending order. The table also shows the individual mean scores as well as the standard deviation of the factors.

#### 7.6.1 Result from descriptive analysis

Table 7.22 shows the mean scores and rankings from the highest to the lowest. The table also shows the benefits of conflict resolution among the construction professionals in Nigeria. According to the respondents, ‘conflict resolution generates new insight/perception’ was ranked first with a mean score (M) of 4.12 and standard deviation (SD) of 1.015; ‘conflict resolution reduces tension among professionals’ was ranked second with (M=3.93; SD=1.052); ‘conflict resolution helps professionals to accomplish their ambitions’ was ranked third with (M= 3.84; SD =1.014); ‘conflict resolution improves workplace conflicts management skills of professionals’ was ranked fourth with (M=3.81; SD= 0.932) and ‘conflict resolution reduces task's ambiguity of professionals’ was ranked fifth with (M= 3.77; SD= 0.932). Furthermore,
‘conflict resolution builds team cohesion (teamwork)’ was ranked sixth with (M=3.76; SD=0.911); ‘conflict resolution enhances commitment to work among the professionals’ was ranked seventh with (M=3.64; SD =0.911); ‘conflict resolution builds relationship among professionals’ was ranked eighth with (M=3.56; SD = 0.952); ‘conflict resolution increases different styles of thinking and behaviours’ was ranked ninth with (M=3.54; SD= 0.864); and ‘conflict resolution restructures professional policy and procedure’ was ranked tenth with (M=3.53, SD= 0.818).

Table 7.22: Benefits of conflict resolution among construction professionals

<table>
<thead>
<tr>
<th>Benefits of Conflict Resolution</th>
<th>Mean (X)</th>
<th>Std. Deviation (σX)</th>
<th>Rank (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict resolution generates new insight/perception</td>
<td>4.12</td>
<td>1.015</td>
<td>1</td>
</tr>
<tr>
<td>Conflict resolution reduces tension among professionals</td>
<td>3.93</td>
<td>1.052</td>
<td>2</td>
</tr>
<tr>
<td>Conflict resolution helps professionals to accomplish their ambitions</td>
<td>3.84</td>
<td>1.014</td>
<td>3</td>
</tr>
<tr>
<td>Conflict resolution improves workplace conflicts management skills of professionals</td>
<td>3.81</td>
<td>0.932</td>
<td>4</td>
</tr>
<tr>
<td>Conflict resolution reduces task ambiguity of professionals</td>
<td>3.77</td>
<td>0.880</td>
<td>5</td>
</tr>
<tr>
<td>Conflict resolution builds team cohesion (teamwork)</td>
<td>3.76</td>
<td>0.908</td>
<td>6</td>
</tr>
<tr>
<td>Conflict resolution enhances commitments to work among the professionals</td>
<td>3.64</td>
<td>0.911</td>
<td>7</td>
</tr>
<tr>
<td>Conflict resolution builds relationship among professionals</td>
<td>3.56</td>
<td>0.952</td>
<td>8</td>
</tr>
<tr>
<td>Conflict resolution increases different styles of thinking and behaviours</td>
<td>3.54</td>
<td>0.864</td>
<td>9</td>
</tr>
<tr>
<td>Conflict resolution restructures professional policy and procedure</td>
<td>3.53</td>
<td>0.818</td>
<td>10</td>
</tr>
</tbody>
</table>

7.6.2 Results from exploratory factor analysis

The EFA results on the methods of resolving conflicts among construction professionals I in Nigeria are depicted in tables 7.23, 7.24, 7.25, 7.26, 7.27, 7.28 and figure 7.10. Table 7.23 presents all the identified benefits of conflict resolution among construction professionals in Nigeria. A total of thirteen variables were outlined and no variable was omitted.

Table 7.23: Definitions of identified benefits of conflict resolution among construction professionals in Nigeria
<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCR1</td>
<td>Conflict resolution builds relationship among professionals</td>
</tr>
<tr>
<td>BCR2</td>
<td>Conflict resolution helps professionals to accomplish their ambitions</td>
</tr>
<tr>
<td>BCR3</td>
<td>Conflict resolution enhances commitment to work among the professionals</td>
</tr>
<tr>
<td>BCR4</td>
<td>Conflict resolution generates new insight/perception</td>
</tr>
<tr>
<td>BCR5</td>
<td>Conflict resolution builds team cohesion (teamwork)</td>
</tr>
<tr>
<td>BCR6</td>
<td>Conflict resolution restructures professional policy and procedure</td>
</tr>
<tr>
<td>BCR7</td>
<td>Conflict resolution reduces task ambiguity of professionals</td>
</tr>
<tr>
<td>BCR8</td>
<td>Conflict resolution improves workplace</td>
</tr>
<tr>
<td>BCR9</td>
<td>Conflict resolution reduces tension among professionals</td>
</tr>
<tr>
<td>BCR10</td>
<td>Conflict resolution increases different styles of thinking and behaviours</td>
</tr>
</tbody>
</table>

Before the principal component analysis (PCA) was commenced, the evaluation of the suitability of the data for factor analysis (FA) was analyzed. Assessing of the correlation matrix table reveals the existence of values above 0.3 as represented in the table 7.24.

**Table 7.24: Correlation matrix**

<table>
<thead>
<tr>
<th>Correlation</th>
<th>BCR1</th>
<th>BCR2</th>
<th>BCR3</th>
<th>BCR4</th>
<th>BCR5</th>
<th>BCR6</th>
<th>BCR7</th>
<th>BCR8</th>
<th>BCR9</th>
<th>BCR10</th>
<th>BCR11</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCR1</td>
<td>1.000</td>
<td>0.621</td>
<td>0.561</td>
<td>0.564</td>
<td>0.603</td>
<td>0.454</td>
<td>0.563</td>
<td>0.521</td>
<td>0.537</td>
<td>0.513</td>
<td></td>
</tr>
<tr>
<td>BCR2</td>
<td>0.621</td>
<td>1.000</td>
<td>0.662</td>
<td>0.621</td>
<td>0.582</td>
<td>0.486</td>
<td>0.559</td>
<td>0.541</td>
<td>0.587</td>
<td>0.298</td>
<td></td>
</tr>
<tr>
<td>BCR3</td>
<td>0.561</td>
<td>0.662</td>
<td>1.000</td>
<td>0.660</td>
<td>0.572</td>
<td>0.485</td>
<td>0.547</td>
<td>0.544</td>
<td>0.629</td>
<td>0.374</td>
<td></td>
</tr>
<tr>
<td>BCR4</td>
<td>0.564</td>
<td>0.621</td>
<td>0.660</td>
<td>1.000</td>
<td>0.529</td>
<td>0.478</td>
<td>0.595</td>
<td>0.544</td>
<td>0.624</td>
<td>0.436</td>
<td></td>
</tr>
</tbody>
</table>
As represented in table 7.25, the KMO measure of sampling acceptability attained a value of 0.931. This has exceeded the maximum value of 0.6. This is considered acceptable to proceed to factor analysis as any value above 0.6 is considered acceptable (Eiselen et al., 2005:107). Moreover, the Barlett’s test of sphericity was statistically significant (<0.05). This has supported the factorability of the correlation matrix.

Table 7.25: KMO and Bartlett’s test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | 0.931 |
| Bartlett’s Test of Sphericity | Approx. Chi-Square | 760.617 |
| Df | 45 |
| Sig. | 0.000 |

Table 7.26 shows the communalities table. In the communalities table all items after extraction should possess values above 0.3. The values as observed from table 7.26 all contain of items greater than 0.3.

Table 7.26: Communalities

<table>
<thead>
<tr>
<th>BCR1 Conflict resolution builds relationships among professionals</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.559</td>
<td>0.550</td>
</tr>
</tbody>
</table>
BCR2 Conflict resolution helps professionals to accomplish their ambitions 0.609 0.567
BCR3 Conflict resolution enhances commitment to work among the professionals 0.587 0.585
BCR4 Conflict resolution generates new insights/perceptions 0.569 0.586
BCR5 Conflict resolution builds team cohesion (teamwork) 0.524 0.544
BCR6 Conflict resolution restructures professional policy and procedure 0.477 0.464
BCR7 Conflict resolution reduces task ambiguity of professionals 0.563 0.594
BCR8 Conflict resolution improves workplace conflict management skills of professionals 0.539 0.561
BCR9 Conflict resolution reduces tension among professionals 0.616 0.652
BCR10 Conflict resolution increases different styles of thinking and behaviour 0.476 0.368

Extraction Method: Principal Axis Factoring.

The total variance explained in Table 7.27 shows the benefits of conflict resolution among professionals in the Nigerian construction industry and their respective eigenvalues. The latent root or Kaiser’s criterion of retaining factors with eigenvalues greater than 1.0 was employed. Only one factor was extracted. The variance of the factor that was extracted is factor 1 (59.151). The statistics of the extracted factor and PCA account for approximately 55% of the variance.

Table 7.27: Total variance explained

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvectors</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>5.915</td>
<td>59.151</td>
</tr>
<tr>
<td>2</td>
<td>0.857</td>
<td>8.567</td>
</tr>
<tr>
<td>3</td>
<td>0.567</td>
<td>5.670</td>
</tr>
<tr>
<td>4</td>
<td>0.518</td>
<td>5.183</td>
</tr>
<tr>
<td>5</td>
<td>0.461</td>
<td>4.605</td>
</tr>
<tr>
<td>6</td>
<td>0.435</td>
<td>4.353</td>
</tr>
<tr>
<td>7</td>
<td>0.364</td>
<td>3.641</td>
</tr>
<tr>
<td>8</td>
<td>0.323</td>
<td>3.229</td>
</tr>
<tr>
<td>9</td>
<td>0.306</td>
<td>3.059</td>
</tr>
<tr>
<td>10</td>
<td>0.254</td>
<td>2.542</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Axis Factoring.
The scree plot in Figure 7.10 revealed a break after the first factor. The steep slope displays the large factor while the gradual trailing off displays the rest of the factors that contain eigenvalue lesser than one (1).

![Scree Plot](image)

Table 7.28 shows factor loadings of each of the variables. The highest loading items on factors 1 are shown. This indicates that these items are the highest ranked benefits of conflict resolution among construction professionals.

**Table 7.28: Factor matrix**

<table>
<thead>
<tr>
<th>Factor Matrix</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict resolution reduces tension among professionals</td>
<td>0.807</td>
</tr>
<tr>
<td>Conflict resolution reduces task ambiguity of professionals</td>
<td>0.771</td>
</tr>
<tr>
<td>Conflict resolution generates new insights/perceptions</td>
<td>0.766</td>
</tr>
<tr>
<td>Conflict resolution enhances commitment to work among the professionals</td>
<td>0.765</td>
</tr>
<tr>
<td>Conflict resolution helps professionals to accomplish their ambitions</td>
<td>0.753</td>
</tr>
<tr>
<td>Conflict resolution improves workplace conflict management skills of professionals</td>
<td>0.749</td>
</tr>
<tr>
<td>Conflict resolution builds relationships among professionals</td>
<td>0.742</td>
</tr>
</tbody>
</table>
The principal axis factoring revealed that one factor was present with an eigenvalue greater than one (1) as represented in table 7.27. Owing to careful observation of the inherent relationships among the variables under each factor, the following assessments were made. Factor one was described as constructive benefit. The factor retained and its constituent indicators are explained below, together with a comprehensive description on how to describe the two factor sections.

**Factor one: Constructive benefit**

As shown in table 7.28, a total of eleven items were loaded onto factor one. The factor was named ‘constructive benefits’ because of the close relation between the items. The factor loads as follows: ‘conflict resolution reduces tension among professionals’ (0.807), ‘conflict resolution reduces task ambiguity of professionals’ (0.771), ‘conflict resolution generates new insights/perceptions’ (0.766), ‘conflict resolution enhances commitment to work among the professionals’ (0.765), ‘conflict resolution helps professionals to accomplish their ambitions’ (0.753), ‘conflict resolution improves workplace conflict management skills of professionals’ (0.749), ‘conflict resolution builds relationships among professionals’ (0.742), ‘conflict resolution builds team cohesion (teamwork)’ (0.738), ‘conflict resolution restructures professional policy and procedure’ (0.681), and ‘conflict resolution increases different styles of thinking and behaviours’ (0.607), with a total variance of 54.716%. The percentages in parenthesis show the respective factors loadings.

### 7.7 SECTION F: FACTORS INFLUENCING CONFLICT MANAGEMENT AMONG CONSTRUCTION PROFESSIONALS IN NIGERIA

Section F of the questionnaire determines the factors most influencing conflict management among construction professionals in Nigeria. The mean items scores for the variables and exploratory factor analysis results are presented. The results of all the descriptive analysis shows
the rankings of every factor in descending order. The table also displays the individual mean scores and the standard deviation of the factors.

### 7.7.1 Results from descriptive analysis

Table 7.29 shows the results of mean item scores from the highest to the lowest of factors influencing conflict management among construction professionals in Nigeria. The table shows that ‘poor leadership styles of professionals’ was ranked first by the respondents with a mean score (M) of 3.98 and standard deviation (SD) of 1.089; ‘inadequate communication among professionals’ was ranked second with (M=3.87; SD=0.960); ‘rudeness amongst the professionals’ was ranked third with (M=3.76; SD=1.073); ‘culture barriers among the professionals’ was ranked fourth with (M=3.68; SD=1.090) and ‘a lack of trust among professionals’ was ranked fifth with (M=3.64; SD=0.988). Furthermore, ‘threatening behaviour among professionals’ was ranked sixth with (M=3.56; SD of 0.913); ‘time pressure among the professionals’ was ranked seventh with a mean score of 3.52 and standard SD of 0.913; ‘inappropriate professionals’ organisational structure’ was ranked eighth with (M=3.41; SD=0.841) and ‘inappropriate professionals’ organisational policy and procedures’ was ranked ninth with (M=3.36; SD =0.878). In addition, ‘lack of professionals gender equality’ was ranked tenth with (M= 3.29; SD=1.057); ‘high stress levels amongst the professionals’ was ranked eleventh with (M=3.27; SD=0.874) and ‘financial problems of the professionals’ was ranked twelfth with (M=3.16; SD=0.899).

#### Table 7.29: Factors influencing conflict management among construction professionals

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean (x)</th>
<th>Std. Deviation (σX)</th>
<th>Rank (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor leadership styles of professionals</td>
<td>3.98</td>
<td>1.089</td>
<td>1</td>
</tr>
<tr>
<td>Inadequate communication among professionals</td>
<td>3.87</td>
<td>0.960</td>
<td>2</td>
</tr>
<tr>
<td>Rudeness amongst the professionals</td>
<td>3.76</td>
<td>1.073</td>
<td>3</td>
</tr>
<tr>
<td>Culture barriers among the professionals</td>
<td>3.68</td>
<td>1.090</td>
<td>4</td>
</tr>
<tr>
<td>A lack of trust among professionals</td>
<td>3.64</td>
<td>0.988</td>
<td>5</td>
</tr>
<tr>
<td>Threatening behaviour among professionals</td>
<td>3.56</td>
<td>0.990</td>
<td>6</td>
</tr>
<tr>
<td>Time pressure among the professionals</td>
<td>3.52</td>
<td>0.913</td>
<td>7</td>
</tr>
</tbody>
</table>
7.7.2 Results from exploratory factor analysis

The EFA results on the methods of resolving conflicts among construction professionals in Nigeria are depicted in tables 7.30, 7.31, 7.32, 7.33, 7.34, 7.35 and figure 7.11. Table 7.30 presents all the identified factors influencing conflict management among professionals in the Nigerian construction industry. A total of twelve variables are outlined; no variable was omitted.

**Table 7.30: Definitions of the identified factors influencing conflict management among construction professionals**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIC1</td>
<td>Poor leadership styles of professionals</td>
</tr>
<tr>
<td>FIC2</td>
<td>Culture barriers among the professionals</td>
</tr>
<tr>
<td>FIC3</td>
<td>Inappropriate professionals’ organisational structure</td>
</tr>
<tr>
<td>FIC4</td>
<td>Inappropriate professionals’ organisational policy and procedures</td>
</tr>
<tr>
<td>FIC5</td>
<td>Time pressure among the professionals</td>
</tr>
<tr>
<td>FIC6</td>
<td>Threatening behaviour among professionals</td>
</tr>
<tr>
<td>FIC7</td>
<td>A lack of trust among professionals</td>
</tr>
<tr>
<td>FIC8</td>
<td>Rudeness amongst the professionals</td>
</tr>
<tr>
<td>FIC9</td>
<td>Financial problems of the professionals</td>
</tr>
<tr>
<td>FIC10</td>
<td>Lack of professional gender equality</td>
</tr>
</tbody>
</table>
Before performing the principal component analysis (PCA), the evaluation for the suitability of the data for factor analysis (FA) was analyzed. Assessing of the correlation matrix table shows that the presence values above 0.3 as represented in Table 7.31.

### Table 7.31: Correlation matrix

<table>
<thead>
<tr>
<th>Correlation</th>
<th>FIC1</th>
<th>FIC2</th>
<th>FIC3</th>
<th>FIC4</th>
<th>FIC5</th>
<th>FIC6</th>
<th>FIC7</th>
<th>FIC8</th>
<th>FIC9</th>
<th>FIC10</th>
<th>FIC11</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIC1 Poor</td>
<td><strong>1.00</strong></td>
<td>0.68</td>
<td>0.53</td>
<td>0.52</td>
<td>0.44</td>
<td>0.55</td>
<td>0.53</td>
<td>0.64</td>
<td>0.34</td>
<td>0.48</td>
<td>0.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>3</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>FIC2</td>
<td>0.68</td>
<td><strong>1.00</strong></td>
<td>0.45</td>
<td>0.46</td>
<td>0.38</td>
<td>0.52</td>
<td>0.54</td>
<td>0.40</td>
<td>0.34</td>
<td>0.56</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>5</td>
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<td>3</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>FIC3</td>
<td>0.53</td>
<td>0.45</td>
<td><strong>1.00</strong></td>
<td>0.65</td>
<td>0.40</td>
<td>0.40</td>
<td>0.56</td>
<td>0.41</td>
<td>0.34</td>
<td>0.30</td>
<td>0.57</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td></td>
<td>4</td>
<td>8</td>
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<td>5</td>
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<td>9</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>FIC4</td>
<td>0.52</td>
<td>0.46</td>
<td>0.65</td>
<td><strong>1.00</strong></td>
<td>0.42</td>
<td>0.34</td>
<td>0.64</td>
<td>0.47</td>
<td>0.37</td>
<td>0.38</td>
<td>0.54</td>
</tr>
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<td>4</td>
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<td>5</td>
<td>7</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>FIC5</td>
<td>0.44</td>
<td>0.46</td>
<td>0.40</td>
<td>0.42</td>
<td><strong>1.00</strong></td>
<td>0.45</td>
<td>0.41</td>
<td>0.51</td>
<td>0.36</td>
<td>0.44</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td></td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>9</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>FIC6</td>
<td>0.55</td>
<td>0.38</td>
<td>0.40</td>
<td>0.34</td>
<td>0.45</td>
<td><strong>1.00</strong></td>
<td>0.46</td>
<td>0.53</td>
<td>0.39</td>
<td>0.33</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td></td>
<td>6</td>
<td>4</td>
<td>9</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>FIC7</td>
<td>0.53</td>
<td>0.52</td>
<td>0.56</td>
<td>0.64</td>
<td>0.41</td>
<td>0.46</td>
<td><strong>1.00</strong></td>
<td>0.51</td>
<td>0.47</td>
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<td>0.56</td>
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<td>1</td>
<td>7</td>
<td>0</td>
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</tr>
<tr>
<td>FIC8</td>
<td>0.64</td>
<td>0.54</td>
<td>0.41</td>
<td>0.47</td>
<td>0.51</td>
<td>0.53</td>
<td>0.51</td>
<td><strong>1.00</strong></td>
<td>0.34</td>
<td>0.50</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>7</td>
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<td>6</td>
<td>5</td>
<td>5</td>
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<td>1</td>
<td>5</td>
</tr>
<tr>
<td>FIC9</td>
<td>0.34</td>
<td>0.40</td>
<td>0.34</td>
<td>0.37</td>
<td>0.39</td>
<td>0.47</td>
<td>0.34</td>
<td>0.34</td>
<td><strong>1.00</strong></td>
<td>0.31</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>FIC10</td>
<td>0.48</td>
<td>0.56</td>
<td>0.30</td>
<td>0.38</td>
<td>0.33</td>
<td>0.32</td>
<td>0.50</td>
<td>0.31</td>
<td>0.39</td>
<td><strong>1.00</strong></td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIC11</td>
<td>0.65</td>
<td>0.54</td>
<td>0.57</td>
<td>0.54</td>
<td>0.49</td>
<td>0.56</td>
<td>0.56</td>
<td>0.49</td>
<td>0.39</td>
<td>0.49</td>
<td><strong>1.00</strong></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As shown in table 7.32, the KMO measure of sampling acceptability attained a value of 0.912; this has exceeded the maximum value of 0.6. This is considered acceptable to proceed with factor analysis as any value exceeding 0.6 is considered acceptable (Eiselen et al., 2005:107). Moreover, the Barlett’s test of sphericity was statistically significant (<0.05). This has supported the factorability of the correlation matrix.

**Table 7.32: KMO and Barlett’s test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.912 |
| Bartlett’s Test of Sphericity | Approx. Chi-Square | 835.424 |
| df | 66 |
| Sig. | 0.000 |

Table 7.33 shows the communalities table. In the communalities table every item after extraction should contain values above 0.3. The values as seen from the table 7.33 all consist of items greater than 0.3.

**Table 7.33: Communalities**

| FIC1 Poor leadership styles of professionals | 0.670 | 0.632 |
| FIC2 Culture barriers among the professionals | 0.589 | 0.574 |
| FIC3 Inappropriate professional organisational structure | 0.534 | 0.567 |
| FIC4 Inappropriate professional organisational policy and procedures | 0.577 | 0.574 |
| FIC5 Time pressure among the professionals | 0.406 | 0.419 |
| FIC6 Threatening behaviour among professionals | 0.450 | 0.378 |
| FIC7 A lack of trust among professionals | 0.561 | 0.625 |
The total variance explained in Table 7.34 shows factors influencing conflict management among professionals in the Nigerian construction industry and their respective eigenvalues. The latent root or Kaiser’s criterion of retaining factors with eigenvalues exceeding 1.0 was employed. Hence, two clusters factors with eigenvalues exceeding one (1) were retained. The following are the variances of each of the retained factors: factor 1 (52.178%) and factor 2 (8.470%). The final statistics of the extracted factors and PCA account for approximately 53% of the overall cumulative variance.

### Table 7.34: Total variance explained

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>6.261</td>
<td>52.178</td>
<td>52.178</td>
</tr>
<tr>
<td>2</td>
<td>1.016</td>
<td>8.470</td>
<td>60.648</td>
</tr>
<tr>
<td>3</td>
<td>0.809</td>
<td>6.744</td>
<td>67.392</td>
</tr>
<tr>
<td>4</td>
<td>0.747</td>
<td>6.224</td>
<td>73.616</td>
</tr>
<tr>
<td>5</td>
<td>0.633</td>
<td>5.276</td>
<td>78.892</td>
</tr>
<tr>
<td>6</td>
<td>0.480</td>
<td>3.998</td>
<td>82.890</td>
</tr>
<tr>
<td>7</td>
<td>0.462</td>
<td>3.853</td>
<td>86.743</td>
</tr>
<tr>
<td>8</td>
<td>0.422</td>
<td>3.513</td>
<td>90.256</td>
</tr>
<tr>
<td>9</td>
<td>0.369</td>
<td>3.073</td>
<td>93.329</td>
</tr>
<tr>
<td>10</td>
<td>0.295</td>
<td>2.461</td>
<td>95.790</td>
</tr>
<tr>
<td>11</td>
<td>0.287</td>
<td>2.394</td>
<td>98.184</td>
</tr>
<tr>
<td>12</td>
<td>0.218</td>
<td>1.816</td>
<td>100.000</td>
</tr>
</tbody>
</table>

<sup>a</sup> Rotation Sums of Squared Loadings
Extraction Method: Principal Axis Factoring.

The scree plot in figure 7.11 revealed a break after the second factor. The steep slope displays the big factor, while the gradual trailing off shows the remaining of the factors that contain eigenvalue lesser than one (1).

![Scree Plot](image)

Figure 7.11: Scree plot

Table 7.35 shows the pattern matrix which displays the factor loadings of each of the variables. The greatest loading items on factors 1 and 2 were shown.

**Table 7.35: Pattern matrix**

<table>
<thead>
<tr>
<th></th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>A lack of trust among professionals</td>
<td>0.827</td>
</tr>
<tr>
<td>Inappropriate professional organisational structure</td>
<td>0.804</td>
</tr>
<tr>
<td>Inappropriate professional organisational policy and procedures</td>
<td>0.754</td>
</tr>
</tbody>
</table>
The principal axis factoring revealed that two (2) factors were present with eigenvalues higher than one (1) as represented in the table 7.34. Owing to careful observation of the inherent relationships among the variables under each factor, the following assessments were made: Factor one was described as inadequate leadership qualities and factor two was lack of professionals’ diversity. The terms used in describing the factors were obtained as a result of closely observing variables within each of the factors. The two factors retained and their constituent indicators are explained below, together with a comprehensive description on how to describe the two factor sections.

**Factor one: Inadequate leadership qualities**

A total of seven items were loaded onto factor one. It is evident that these items shown in table 7.35 have a close relationship, therefore the items were named ‘inadequate leadership qualities’. The factor loads as follows: ‘a lack of trust among professionals’ (0.827), ‘inappropriate professional organisational structure’ (0.804), ‘inappropriate professional organisational policy and procedures’ (0.754), ‘inadequate communication among professionals’ (0.668), ‘financial problems of the professionals’ (0.434), ‘poor leadership styles of professionals’ (0.433), and ‘threatening behaviour among professionals’ (0.419), with a total variance of 48.412%. Percentages in parenthesis show the respective factors loadings.
**Factor two: Lack of professionals’ diversity**

As shown in table 7.34, a total of five items were loaded onto factor two which was termed as ‘lack of professionals’ diversity’ because of a close relationship among the items. The factor loads as follows: ‘lack of professional gender equality’ (0.873), ‘high stress level amongst the professionals’ (0.625), ‘culture barriers among the professionals’ (0.557), ‘rudeness amongst the professionals’ (0.538) and ‘time pressure among the professionals’ (0.452) with a total variance of 4.942%. The percentages in parenthesis show individual factors loadings.

**Table 7.36: Cronbach’s alpha for factors extracted from factor analysis**

Factor 1 of ‘causes of conflict among construction professionals’ had an alpha of 0.950, and factor 2 had 0.835 while factor 1 of ‘impacts of construction professionals’ conflicts’ had 0.928, factor 2 had 0.917. Furthermore, factor 1 of ‘methods of conflict resolution’ had 0.836, factor 2 had 0.776. Likewise factor 1 of ‘benefits of conflict resolution’ had 0.923. Finally, Factor 1 of those ‘factors influencing conflict management’ had 0.852, and factor 2 had 0.798.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cronbach’s Alpha</td>
<td>No. of items</td>
</tr>
<tr>
<td>Causes of conflicts among construction professionals</td>
<td>0.950</td>
<td>8</td>
</tr>
<tr>
<td>Impacts of construction professionals’ conflicts on performance</td>
<td>0.928</td>
<td>9</td>
</tr>
<tr>
<td>Methods of resolving conflict among construction professionals</td>
<td>0.836</td>
<td>7</td>
</tr>
<tr>
<td>Benefits of conflict resolution among construction professionals</td>
<td>0.923</td>
<td>10</td>
</tr>
<tr>
<td>Factors influencing conflict management among construction professionals</td>
<td>0.852</td>
<td>8</td>
</tr>
</tbody>
</table>
7.7.3 Results from the normality tests
This particular aspect explains the normality test carried out on the compared groups to ascertain whether they are distributed normally or not. In this study, 0.05 was used as the lowest value for normality tests. Sample sizes from 50 and above use the Kolmogorov-Smirnov statistics results, while for sample sizes that are less than 50 usually use Shapiro-Wilk statistics results. In this study the sample size is greater than 50, therefore Kolmogorov-Smirnov statistics results were used.

Table 7.37: Normality tests for factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistics</td>
<td>Df</td>
</tr>
<tr>
<td>FCC_F1</td>
<td>Professionals’ personality differences</td>
<td>0.220</td>
</tr>
<tr>
<td>FCC_F2</td>
<td>Professionals’ working situations</td>
<td>0.168</td>
</tr>
<tr>
<td>ICP_F1</td>
<td>Functional impacts</td>
<td>0.217</td>
</tr>
<tr>
<td>ICP_F2</td>
<td>Dysfunctional impacts</td>
<td>0.238</td>
</tr>
<tr>
<td>MRC_F1</td>
<td>Mediating techniques</td>
<td>0.261</td>
</tr>
<tr>
<td>MRC_F2</td>
<td>Confronting techniques</td>
<td>0.194</td>
</tr>
<tr>
<td>BRC_F1</td>
<td>Constructive benefits</td>
<td>0.238</td>
</tr>
<tr>
<td>FIC_F1</td>
<td>Inadequate leadership qualities</td>
<td>0.166</td>
</tr>
<tr>
<td>FIC_F2</td>
<td>Lack of professionals’ diversity</td>
<td>0.240</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction

Table 7.37 shows that the normality test for the factor ‘professionals personality differences’ indicates that the p-value was lower than 0.05 as shown in the table above. The null hypothesis (Ho) is rejected and the hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor ‘professional’s personality differences’.

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The normality test for the factor ‘professionals working conditions’ indicates the p-value was lower than 0.05; the null hypothesis (H₀) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘professionals working conditions’.

The normality test for the factor ‘functional impacts’ indicates the p-value was lower than 0.05 as shown in the table above. The null hypothesis (H₀) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘functional impacts’.

The normality test for the factor ‘dysfunctional impacts’ indicates that p-value was lower than 0.05 as shown in the table above. The null hypothesis (H₀) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘dysfunctional impacts’.

The normality test for the factor ‘mediating techniques’ indicates that the p-value was lower than 0.05 as shown in the table above. The null hypothesis (H₀) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘mediating techniques’.

The normality test for the factor ‘confronting techniques’ indicates that the p-value was lower than 0.05 as shown in the table above. The null hypothesis (H₀) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘confronting techniques’.
The normality test for the factor ‘constructive benefits’ indicates that the p-value was lower than 0.05 as shown in the table above. The null hypothesis (Ho) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘constructive benefits’.

The normality test for the factor ‘inadequate leadership quality’ indicates that the p-value was less than 0.05 as shown in the table above. The null hypothesis (Ho) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘lack of inadequate leadership quality’.

The normality test for the factor ‘lack of professional’s diversity’ indicates that the p-value was lower than 0.05 as shown in the table above. The null hypothesis (Ho) is rejected and hypothesis (H₁) is accepted. Consequently, it is not evenly distributed.

**Conclusion:** The null hypothesis was rejected (H₀). This specifies that there is a difference between the variables that formed the factor for ‘lack of professional’s diversity’.

### 7.13 CONCLUSION

This chapter presented the findings of this research study. The interpretations of the results were done using tables, and graphs/charts among others. In the next chapter, a discussion of these results is presented.
CHAPTER EIGHT
DISCUSSION OF FINDINGS

8.1 INTRODUCTION

This specific chapter is based on discussion of findings from the analysis in Chapter Seven regarding the research questions. The findings are therefore extended to the literature review in the Chapters One, Two, Three, Four, and Five. This is done to confirm whether the outlined research questions have been answered from the data analyzed in Chapter Seven. Results of the findings are presented in relation to the research questions and the relevant data as specified.

The following research questions were used to guide the study of conflict management among professionals in Nigerian construction industry:

1. What are the factors that cause conflict among construction professionals in the Nigerian construction industry?
2. What are the impacts of construction professionals’ conflict on performance in the Nigerian construction industry?
3. What are the methods of resolving conflict among construction professionals in the Nigerian construction industry?
4. What are the benefits of conflict resolution amongst the construction professionals in Nigerian construction industry?
5. What are the factors influencing conflict management in the Nigerian construction industry?

8.2 BACKGROUND INFORMATION

This first section discusses background information of the respondents with regard to their demographics, namely age group, professional qualifications, years of experience, highest educational qualifications, incidence (number) of conflict experienced, and intensity of conflict experienced with other construction professionals.

8.2.1 Background information results and discussions

From the 135 useable questionnaires, the following information was gathered.
A total of 24.4% were quantity surveyors, 17.8% were civil engineers, 17.0% were builders, 14.8% were architects, 13.3% were project managers, and 12.6% were construction managers by profession. This indicates that the most responses are from quantity surveyors. Furthermore, findings regarding the respondents’ age group indicated that 19.3% were from 51-55 years, 17.0% were from 46-50 years, 14.1% were from 41-45 years, 13.3% were between 26 to 30 years, 12.6% of were from 56 years above, 9.6% were between 31 and 35 years, 7.4% were between 36 and 40 years, and 6.7% were in the age group of 21 to 25 years. This indicated that respondents between 51-55% reflected the highest number of responses. Additionally, regarding years of experience, 31.9% of the respondents have 11-15 years of experience in the construction, 31.9% of the respondents have 20 years above, 20.0% has 1-5 years, and 16.3% has 6-10 years of experience, which indicates that professionals with 11-15 years and more than 20 years represent the highest number of responses. Regarding the respondents’ educational qualifications, it was reveals that 39.3% of the respondents have master’s degree, 33.3% have bachelor degree, 20.7% have a higher national diploma (HND), 3.7% have doctorate and 3.0% have an ordinary national diploma (OND). This indicates that professionals with master’s degree have the highest responses.

Based on the incidence (number) of conflicts that professionals have experienced with other professionals in the construction industry, 42.2% have experienced a high incidence of conflict while 37.0% have experienced a moderate incidence. A total of 8.1% of respondents have experienced a very low incidence of conflict with other professionals in the construction industry. Likewise, 8.1% respondents have experienced a very high incidence of conflict with other professionals in the construction industry. 3.0% of respondents have experienced a few (low) incidences of conflict with other professionals in the construction industry. Lastly, 1.5% of respondents have experienced no incidences of conflict with other professionals in the construction industry. This means that professionals have generally experienced a high incidence (number) of conflicts with other professionals in the construction industry. Regarding the intensity of conflicts that construction professionals have experienced, 37.7% of the respondents have experienced a high intensity of conflict with other professionals and 31.1% of respondents have experienced incidents of conflict of moderate intensity with other professionals in the construction industry. However, 12.6% of the respondents have experienced incidents of conflict of very high intensity with other professionals, and 10.4% of the respondents population
have experienced incidents of conflict of low intensity with other professionals in the construction industry. While 5.9% of the respondents have experienced incidents of very low intensity of conflict with other professionals. Lastly, 2.2% of the respondents have experienced no conflict with other professionals in the construction industry. This indicated that construction professionals in Nigeria have experienced high intensity of conflicts with other construction professionals.

8.3 RESEARCH QUESTION ONE (RQ1)

RQ1: What are the factors that cause conflict among construction professionals in the Nigerian construction industry?

8.3.1 Discussions of findings

Results from descriptive analysis

Based on the results from the descriptive analysis, it was observed that favouritism among construction professionals was rated as the highest cause of conflict among construction professionals. Favouritism among professionals, according to the respondents, was ranked first with a mean score (M) of 4.01 and standard deviation of (SD) of 1.103; ‘role ambiguity’ was ranked second with (M= 3.96; SD =1.105); ‘differences in professionals’ experiences was ranked third with (M= 3.93; SD =1.167); ‘differences in level of education’ was ranked fourth with (M= 3.90; SD =1.253); ‘differences in personalities’ was ranked fifth with (M = 3.87; SD= 1.098); ‘differences in professionals’ goals and views’ was ranked sixth with (M= 3.84; SD =1.112). In addition, ‘poor decision making of professionals’ was ranked seventh with (M=3.79; SD= 0.978); ‘indiscipline’ among professionals’ was ranked eighth with (M=3.57; SD =1.062); ‘lack of coordination among professionals’ was ranked ninth with (M= 3.50; SD =0.897); ‘poor dissemination of information’ was ranked ninth with (M= 3.50; SD = 0.897) and ‘change order over tasks among professionals’ was ranked tenth with (M= 3.46; SD=0.976); Furthermore, ‘high dependency on other professionals’ was ranked eleventh with (M=3.34; SD=0.865); ‘inappropriate administrative style of professionals’ was ranked twelfth with a (M= 3.28; SD =0.895); ‘financial problems of professionals’ was ranked fourteenth with (M= 3.27; SD = 1.024); and finally, ‘poor working conditions ‘ was ranked fifteenth with (M= 3.21; SD =0.995).
The findings of this study revealed that favouritism, role ambiguity, differences in professionals’ experiences, differences in levels of education, and differences in personalities were the highest rated factors that cause conflict among construction professionals. Other factors include differences in professionals’ goals and views, poor decision making of professionals, indiscipline among professionals, lack of coordination among professionals, poor dissemination of information, change order over tasks among professionals, high dependency on other professionals, inappropriate administrative style of professionals, financial problems of professionals, and poor working conditions. Tshuma, Ndlovu and Bhebhe (2016); Kipyego (2013) agree that favouritism is one of the major causes of conflict. Favouritism among construction professionals means preferring one professional over others which usually leads to conflict. Due to favouritism, conflict usually arises among the construction professionals because majority of the professionals in the construction industry are not selected according to agreed criteria. This study also revealed role ambiguity as a factor that causes conflict among construction professionals. According to Iraj et al (2013: 1928), role ambiguity is one of the major causes of conflict. Therefore, if a professional does not understand precisely what to do, such professionals may be confused regarding work or duties to carry out, which can cause conflict. According to (Saiti, 2015), certain roles are expected to be carried out by professionals: when there is inadequate clarity of the role as well as the job requirements then the professionals encounter an unfamiliar working environment and this might lead to an unanticipated pattern of behaviour.

It was also revealed that a difference in professionals’ experience is among the main factors that usually cause conflict. Robbins (2000), Johdi and Apitree (2012), Aldag and Kuzuhara (2002), Gross and Guerrero (2000), Yambo (2012) and Adenaiya (2017) agree that differences in personalities are one of the major factors that cause conflict. Robbins (2000) opined that conflicts can occur when individual professionals admire personal value systems like experience. Sometimes the experience diversity makes the relationship among professionals difficult for them to work together. Usually, professionals have different levels of skills and abilities. Johdi and Apitree (2012) contend that conflict can occur when an experienced professional works with a trainee who has good theoretical understanding but limited practical skills. Experienced long serving professionals who graduated some years ago may possibly experience some conflict when working with young graduates who have the most current and up-to-date techniques.
Results from the exploratory factor analysis

Even though no conclusive standard exists, the higher the loading, the greater self-assurance the researcher can have that a strong relationship exists. Lee’s (1992) regularly cited guideline for interpreting loadings is as follows: 0.710 = excellent, 0.630 = very good, 0.550 = good, 0.450 and 0.320 = poor.

From factor analysis, two factors emerged and they are discussed below:

Factors one: Professionals’ personality differences

A total of eight items loaded onto factor one. This factor loads the following: differences in level of education (0.926), differences in professionals’ goals and views (0.789), differences in professionals’ experiences (0.766), role ambiguity (0.704), indiscipline among professionals (0.700), differences in personalities (0.661), favouritism among professionals (0.625), and high dependency on other professionals’ work (0.625), with a total variance of 47.582%.

The findings from the results show items that were highly significant under professionals’ personality differences such as differences in levels of education, differences in professionals’ goals and views, differences in professionals’ experiences, role ambiguity and indiscipline among professionals. Johdi and Apitree, 2012, Afful- Broni (2013), Ghaffar et al (2015) and Narh et al 2015) stated that attribute differences are the major cause of conflict. Johdi and Apitree (2013) and Afful- Broni (2013) highlighted that pressure sometimes happens among professionals due to differences in levels of education as some professionals sometimes prove they are more experienced and capable than their counterparts. Also Johdi and Apitree (2012) identified differences in goals and views as a major cause of conflict. Furthermore, Iraj et al (2013: 1928) state that role ambiguity occurs when a professional does not understand precisely what to do; such professionals may be confused about work or duties to carry out. They also indicated that role ambiguity detracts from job stability and affects professionals’ personality. Likewise, Kipyego (2013) agrees that indiscipline usually causes conflict because some professionals are always involved in misunderstandings with others and this frequently results in
the abandonment of tasks, murmuring and complaining about tasks. Such professionals are regularly absent as well as unreachable and also find it hard to apply discipline with others.

**Factor two: Professionals’ working situation**

Seven factors loaded onto factor two. This factor loaded lack of coordination among the professionals (0.790), inappropriate administrative style of professionals (0.778), change order over tasks among professionals (0.726), poor dissemination of information (0.624), poor working conditions (0.555), poor decision making of professionals (0.526), and financial problems of professionals (0.404) with a total variance of (7.900%).

The findings shows items that were loaded in professionals’ working situation such as lack of coordination, inappropriate administrative style of professionals, change order over tasks and poor dissemination of information among professionals. However, lack of coordination among construction professionals is a serious issue which usually causes conflict in the construction industry. Chen et al (2008:71) concur that lack of coordination is one of the factors that usually cause conflict. They further stated that coordination among the professionals is both essential and necessary in order to avoid conflict. Dick and Thodlana (2013) and Johdi and Api tree, (2012) stated that an inappropriate administrative style by construction professionals is a common cause of conflict. Therefore, if the administrative style of professionals is not well organized and managed this can lead to a serious conflict in the construction industry. Desai et al (2015:152) and Mitkus and Mitkus (2013:779) identified change order as one of the core causes of conflict. Desai et al (2015:152) opined that change orders are usually issued to cover differences in scope of professionals tasks and it regularly have a serious impact on the quality, time, as well as cost of tasks. Therefore changes orders require appropriate analysis as well as action to examine the reasons and effects of the change orders. It is problematic and dangerous to manage them, but it is essential to manage change order among construction professionals. Change orders among the construction professional usually occurs due to various circumstances, and it often causes misunderstanding among the professionals which then lead to conflict.

**8.3.2 Implications of the results**

The theoretical review is consistent with empirical findings of this research study. This is clear in the empirical study. It can be concluded from the study that favouritism among construction...
professionals was seen as the biggest cause of conflict among the construction professionals in Nigeria. Other prominent causes are role ambiguity, differences in professionals’ experiences and differences in level of education. Therefore, there is a need for construction professionals to avoid all these factors that usually cause conflict among them. Also, there is a need for construction professionals to be selected according to agreed criteria in the construction industry; in this way favouritism will be eradicated. Furthermore, construction professionals should be able to understand their exact duties and which should be carried out on time in order to avoid conflict.

8.4 RESEARCH QUESTION TWO (RQ2)

RQ2: What are the impacts of construction professionals’ conflict on performance in the Nigerian construction industry?

Results from the descriptive and exploratory factor analysis were used in answering this research question.

8.4.1 Discussions of findings for impacts of construction professionals conflicts on performance

Results from descriptive analysis

Based on the results from the descriptive analysis on the impacts of construction professional’s conflict on performance, it appeared that ‘conflict leads to abandonment of professionals work’ was the most recognised with a mean score (M) of 3.90 and standard deviation (SD) of 1.25; “conflict reduced communication among construction professionals” was ranked second with (M= 3.85; SD =1.10); “conflict created job pressure” was ranked second; “conflict led to frustrations of professionals in carrying out their work” was ranked third with (M= 3.75; SD =1.10); “conflict created displeasure among professionals” was ranked fourth with (M= 3.74; SD =0.99); and “conflict helped professionals in early problem” identification was ranked fifth with (M=3.71; SD = 1.23). In addition, “conflict caused work damages among professionals” was ranked sixth with (M=3.62; SD =1.06); “conflict helped in solving professionals’ organization problems” was ranked seventh with (M=3.55; SD =1.12); “conflict improved productivity of professionals” was ranked eighth with (M= 3.53; SD =1.30); “conflict improved communication among the professionals” was ranked ninth with (M=3.53; SD =1.24); “conflict destroyed
emotional well-being of professionals” was also ranked ninth with (M= 3.53; SD =1.01) and “conflict affected professionals morale” was ranked tenth with a (M=3.46; SD =1.03). Furthermore, “conflict enhanced resourceful thoughts of professionals” was ranked twelfth with (M= 3.41; SD=1.05); ‘conflicts create climate of mistrust among professionals” was ranked thirteenth with (M=3.37; SD = 0.97); “conflict increased resistance to transformation among professionals” was ranked fourteenth with a (M= 3.36; SD= 3.34); “conflict brought ideas for innovation among professionals” was ranked fifteenth with (M=3.17; SD =1.07); “conflict enhanced creativity among professionals was ranked sixteenth with (M=3.17; SD=1.07) and finally, “conflict created better trust among the professionals” was ranked seventeenth with (M=2.84; SD=1.02).

The findings of the results revealed that the highest rated impacts of construction professional’s conflict on performance were that conflict leads to the abandonment of professionals’ work, conflict reduces communication among construction professionals, conflict creates job pressure, conflict leads to the frustration of professionals in carrying out their work and conflict created displeasure among professionals. Kassab, Hegazy and Hipel (2010) agree that conflict can results to work abandonment with the possibility of leading to task disasters. In addition, abandonment of professionals’ tasks in the construction industry can be caused through misunderstandings and crises among the professionals, which can lead to reduce performance. It was also revealed from the findings that conflict reduces communication among professionals. Khan et al (2016:162) identified reduced communication as one of the most significant impacts of conflict. Whenever conflict occurs among professionals in construction industry, whether they are working in teams or on an individual level, the frequency of communication is affected and reduced. Muema (2012) also opined that poor communication among professionals in the workplace is a serious issue and can be costly to the professionals in the construction industry. The impact can be overwhelming to the construction professionals involved.

**Results from exploratory factor analysis**

From factor analysis, two factors emerged and they are discussed below:

**Factor one: Functional impacts**
A total of nine items were loaded onto factor one. This factor loads as follows: conflict improved communication among the professionals (0.859), conflict helps professionals to share opinions (0.805), conflict improved productivity (0.805), conflict enhances creativity among the professionals (0.787), conflict produces ideas for innovation among professionals (0.727), conflict creates better trust among the professionals (0.719), conflict enhances resourceful thoughts of professionals (0.697), conflict helps in early problem identification (0.695) and conflict helps in solving professionals’ organisational problems (0.681) with a total variance of 49.476%. Percentages in parenthesis show the respective factor loadings.

The results of these findings show variables in functional impacts of construction professionals’ conflict were rated as high by the respondent. The variable include conflict improved communication among the professionals, conflict helped professionals to share opinions, conflict improved productivity, conflict enhanced creativity among the professionals, conflict brought ideas for innovation among professionals, conflict created better trust among the professionals, conflict enhanced resourceful thoughts of professionals, conflict helped in early problem identification and conflict helped in solving professionals’ organisational problems. Isa (2015:15) agrees that conflict improves communication among the professionals. He further stated that in a well-managed conflict situation, communication among professionals can be improved and can bring professionals together and facilitate them to be taught more concerning each other. Moreover, communication is essential as part of a functional impact of conflict among construction professionals. Omisore and Abiodun (2013) stated that well-managed conflict usually helps in order to share opinions, which can lead to improved performance of construction professionals. Kumar et al (2015) opined that conflict can improve productivity; they stated that productivity is the ratio of output to input of tasks carried out among the professionals in the construction industry. If conflicts are managed well among construction professionals, this can actually improve professionals’ productivity in the construction industry. Based on the assertion of Yong et al (2014:268), conflict enhances creativity among the professionals. They believe that creativity involves combining various perceptions to produce innovative as well as useful solutions.

**Factor two: Dysfunctional impacts**
Ten items were loaded onto factor two and these items relate to dysfunctional impacts. This factor loads as follows: conflict created job pressure (0.416), conflict caused work damages among professionals (0.821), conflict increased resistance to transformation among professionals (0.819), conflict destroyed the emotional well-being of professionals (0.776), conflict created displeasure among professionals (0.774), conflict created a climate of mistrust among the professionals (0.738), conflict reduced communication among professionals (0.738), conflict led to frustrations of professionals in carrying out work (0.714), conflict affected professional morale (0.697) and conflict led to the abandonment of professionals work (0.590), with a total variance of 10.708%. The percentages in parenthesis show the respective factor loadings. As seen from the result, nine loadings items in factor two (negative impact) exceed 0.60, which specifies that a strong relationship occurs between the items.

The findings shows items loaded on dysfunction impacts in which “conflict created job pressure” was the highest significant dysfunctional impact of construction professionals on performance. Isa (2015:55) stated that conflict created job pressure because the pressure itself is usually caused from being stressed. He stated that professionals have various ways of responding to stress, therefore a situation that feels stressful to a professional may be motivating to others. Some other top three significant dysfunctional impacts as rated by the respondents are that conflict caused work damage among professionals, conflict increased resistance to transformation among professionals and conflict destroyed the emotional well-being of professionals. Omisore and Abiodun (2014:13) agree that conflict might lead to work damage. Unmanaged conflict usually causes damage to construction professionals’ performance in the construction industry. Furthermore, frustration among professionals is described as the unanticipated problem of an expected goal achievement. Andalib et al (2010:2) stated that frustration is a state of mind which leads construction professionals to a situation that is captured by all destructive emotion.

8.4.3 Implications of results

The theoretical review is consistent with the empirical findings of this research study. The responses tally with the literature on the impacts of construction professionals’ conflict on performance. From the findings, it was indicated that abandonment of professionals’ work, reduced communication among construction professionals, job pressure, frustrations of professionals in carrying out their work and displeasure among professionals were the highest
rated impacts of construction professionals’ conflict on performance. These particular impacts are referred to as destructive impacts of conflict because they affect professionals’ performance in the construction industry. There is a need for construction professionals to ensure whatever leads to the abandonment of their work should be avoided.

8.5 RESEARCH QUESTION THREE (RQ3)

RQ3: What are the methods of resolving conflict among construction professionals in the Nigerian construction industry?

8.5.1 Discussion of findings of methods of resolving conflict among construction professionals

Result from the descriptive analysis and exploratory were used in answering this question.

Results of descriptive analysis

From the results of descriptive analysis on methods of resolving conflicts among construction professionals, it was observed that ‘collaborating’ was ranked first with a mean score (M) of 4.13 and standard deviation (SD) of 0.973; ‘accommodating’ was ranked second with (M=3.93; SD =1.087); ‘negotiating’ was ranked second with (M=3.93; SD =1.005); ‘compromising among the professionals’ was ranked third with (M=3.72; SD=1.386); ‘mediating’ was ranked fourth with (M= 3.63; SD=0.826); ‘arbitrating’ was ranked fifth with (M= 3.60; SD=0.924). Furthermore, ‘mediating-arbitrating’ was ranked sixth with a (M=3.39; SD =0.946); ‘contending’ was ranked sixth with (M=3.39; SD = 1.044); ‘obliging’ was seventh with (M= 3.35; SD=0.692); ‘early neutral evaluating’ was ranked eighth with a mean score of 3.34 and SD of 0.932; ‘confronting’ was ranked ninth with (M= 3.24; SD =0.971); ‘avoiding’ was ranked tenth with (M= 3.16; SD= 1.073) and finally, ‘dominating’ was ranked eleventh with (M= 3.10; SD of 1.205).

The findings revealed that collaborating is the most frequently used method in resolving conflict among construction professionals. Tsuma and Ndlovu (2016:85) agree that collaborating is one of the major methods of resolving conflict and requires excessive courage and much attention. Moreover, collaborating is a method of conflict resolution in which a professional attempts to work collectively with others. The benefit of using this collaborating method is to make all professionals satisfied with the final decision (Montoya-Weiss et al., 2001). Also, owing to allowing all construction professionals to be satisfied with the final decision, it more extensive
time and effort are required than other method of conflict resolution. The findings of this study also revealed four other popular methods of resolving conflict among construction professionals, namely accommodating, negotiating, compromising, and mediating-arbitration. Khan et al (2016:162-163) identified that accommodation is one of the most popular methods used in resolving conflict because professionals are more likely to adjust to the current condition without putting up resistance in order to resolve it. Moreover, Iiban (2008:3) opined that compromising has its focus in both one’s own as well as others’ interests. Compromising consist of a give-and-take situation whereby professionals will give up something after conciliation so as to attain an agreement. It will create I-win and I-lose situation to create compromise.

Results of exploratory factor analysis

From factor analysis, two factors emerged and they are discussed below:

Factor 1: Mediating techniques

Seven items loaded on factor one. The factor was named ‘mediating techniques’ owing to the incorporation of the items. This factor loads as follows: mediating (0.850), arbitrating (0.735), negotiating (0.669), early neutral evaluating (0.647), mediating-arbitrating (0.64.1), obliging (0.472), and avoiding (0.328), with a total variance of 45.695%. The percentages in parenthesis show the respective factor loadings.

As seen from the findings, five loading items in factor one (mediating techniques) exceed 0.60, which indicates that a strong relationship occurs among the items.

The findings show some significant methods of resolving conflicts among professionals which were termed mediating techniques. These methods are mediating, arbitrating, negotiating, early neutral evaluating, mediating-arbitrating, obliging and avoiding. Cheng and Yiu (2007) identified mediation as one of the major methods of resolving conflict. Also, Heather (2016) stated that mediation has appeared in the past decade as an active method of resolving conflict. According to Gulghane and Khandve (2015:2), arbitration is a form of resolving conflict and it is therefore essential that for arbitration to proceed, the professionals must agree to refer their conflict to arbitration. Such consent is known to be an arbitration agreement. The arbitration can either be oral or written. Furthermore, Christobal (2015:45) refers to negotiation as the course of
decision making in order to avoid conflicts. Its communication is direct and official among the construction professionals (CP) who are motivated to reach an agreement for shared benefit.

**Factor 2: Confronting techniques**

A total of six items were loaded onto factor two, as shown in table 7.21. The factor was labelled ‘confronting techniques’ as a result of the relationship between the items. The factor loads as follows: dominating (0.882), contending (0.756), compromising among the professionals (0.715), confronting (0.649), collaborating (0.550) and accommodating (0.473) with a total variance of 6.789%. The percentages in parenthesis show the individual factors loadings. Four loading items in factor one (mediating techniques) exceed 0.60, which indicates that a strong relationship occurs among the items.

The findings of the results show methods for confronting techniques in conflict resolution among construction professionals. Dominating was loaded higher as a method of resolving conflict. Kassim and Ibrahim (2014:3) agree that dominating is one of the major methods in resolving conflict. They describe dominating as a method which involves high concern for the self and low concern for the other professionals involved in the conflict. Furthermore, Jeong (2008:31) states that a contending method of resolving conflict focuses on achieving a defeat and overcoming other professionals through an effort to show how inappropriate they are. According to Copley (2008:7), contending style has high concern for oneself, which is characterized by a desire to exploit individual achievement, even at the expense of others. This method is different from the collaborating method, which ensures resolutions to conflict fulfill the desires of all professionals involved. Furthermore, Lim and Yazdanifard (2012:146) stated that compromising involves a give-and-take situation whereby both professionals will give up something after negotiation in order to reach an agreement.

**8.5.2 Implications of results**

The theoretical review is consistent with the empirical findings of this research study. The responses tally with the literature on methods of resolving conflict among construction professionals. From the findings it was discovered that collaborating is the most regularly used
method in resolving conflict among construction professionals. This means there is a need for construction professionals to work collectively and share opinions in order to solve conflict among themselves. The use of collaboration in resolving conflict will surely enhance professionals’ performance in the construction industry because when professionals collaborate, it will be difficult for conflict to occur among them.

8.6 RESEARCH QUESTION FOUR (RQ4)

R4: What are the benefits of conflict resolution amongst the construction professionals in the Nigerian construction industry?

8.6.1 Findings from benefits of conflict resolution among construction professionals

Results from descriptive analysis

From the descriptive analysis of benefits of conflict resolution among the construction professionals it was indicated that ‘conflict resolution generates new insights/perceptions’ was ranked first with a mean score (M) of 4.12 and standard deviation (SD) of 1.015; ‘conflict resolution reduces tension among professionals’ was ranked second with (M=3.93; SD=1.052); ‘conflict resolution helps professionals to accomplish their ambitions’ was ranked third with (M=3.84; SD =1.014); ‘conflict resolution improves workplace conflicts management skills of professionals’ was ranked fourth with (M=3.81; SD= 0.932) and ‘conflict resolution reduces task's ambiguity of professionals’ was ranked fifth with (M= 3.77; SD= 0.932). Furthermore, ‘conflict resolution builds team cohesion (teamwork)’ was ranked sixth with (M=3.76; SD=0.911); ‘conflict resolution enhances commitment to work among the professionals’ was ranked seventh with (M=3.64; SD =0.911); ‘conflict resolution builds relationship among professionals’ was ranked eighth with (M=3.56; SD = 0.952); ‘conflict resolution increases different styles of thinking and behaviours’ was ranked ninth with (M=3.54; SD= 0.864); and ‘conflict resolution restructures professional policy and procedure’ was ranked tenth with (M=3.53, SD= 0.818).

The findings indicated that ‘conflict resolution generates new insights/perceptions’ was the highest rated significant benefit of conflict resolution among construction professionals. This was followed by the next top four in conflict resolution among professionals in the construction industry, namely conflict resolution reduces tension among professionals, conflict resolution
helps professionals to accomplish their ambitions, and conflict resolution improves workplace conflict management skills of professionals. Stefan (2017) agrees that conflict resolution generates new insights/perceptions because it can lead to new approaches. If construction professionals were always in agreement, there would be no cause to consider unusual viewpoints for new methods to resolve issues.

However, when construction professionals contribute their individual distinctive views and thoughts, they offer other professionals an opportunity to look at issues from a different perception. It enables every construction professional to imagine other viewpoints. This study also revealed that conflict resolution reduces tension. If construction professionals are able to handle conflict appropriately among themselves, their individual relationships are improved and this will surely reduce tension among the professionals in the construction industry. Conflict resolution also helps professionals to accomplish their ambition; as they resolve conflicts, they make development in the direction of accomplishing their goals in the construction industry. This is proper in expressions of each professional’s ambition of becoming more united with their conflict partner. Once conflict is resolved among construction professionals, this will enhance professionals’ performance in the construction industry.

Results from exploratory factor analysis

Even though no conclusive standard exists, the higher the loading, the better confidence the researcher can possess that a strong relationship occurs. Lee’s (1992) often cited guideline for interpreting loadings is as follows: 0.710 = excellent, 0.630 = very good, 0.550 = good, 0.450 and 0.320 = poor.

From factor analysis, one factor emerged and it is discussed below:

Factor 1: Constructive benefit

A total of eleven items were loaded onto factor one. The factor was named ‘constructive benefits’ as a result of close relationships among the items. The factor loads as follows: conflict resolution reduces tension among professionals (0.807), conflict resolution reduces task ambiguity of professionals (0.771), conflict resolution generates new insights/perceptions (0.766), conflict resolution enhances commitment to work among the professionals (0.765), conflict resolution helps professionals to accomplish their ambitions (0.753), conflict resolution
improves workplace conflict management skills of professionals (0.749), conflict resolution builds relationships among professionals (0.742), conflict resolution builds team cohesion (teamwork) (0.738), conflict resolution restructures professional policy and procedure (0.681) and conflict resolution increases different styles of thinking and behaviour (0.607) with a total variance of 54.716%. The percentages in parenthesis show the respective factors’ loadings. This cluster accounted for 54.716% of the variance. All the items’ loadings in factor one (Constructive benefits) exceed 0.60, which indicates that a strong relationship occurs among the items.

The findings revealed various benefit of conflict resolution among construction professionals. It was revealed that conflict resolution reduces tension among the professionals is one of the most vital benefits of conflict resolution. Conflict resolution reduces the professionals’ tension and this will help professionals to interact freely and share ideas with other professionals for development to take place in the construction industry. Other benefits that were rated as some of the significant benefits of conflict resolution are that conflict resolution reduces task ambiguity of professionals, conflict resolution generates new insights/perceptions, conflict resolution enhances commitment to work among the professionals, conflict resolution helps professionals to accomplish their ambitions, conflict resolution improves the workplace conflict management skills of professionals, conflict resolution builds relationships among professionals, conflict resolution builds team cohesion (teamwork), conflict resolution restructures professional policy and procedure, and conflict resolution increases different styles of thinking and behaviour. Whenever conflict has been resolved among the construction professionals, this reduces the task ambiguity of professionals because professionals work responsibly and the extent of authority will be clear and certain. Conflict resolution also generates new insights/perceptions; once conflict is resolved this will help professionals to share their opinions and ideas and this will lead to improvement the construction industry.

8.6.2 Implications of the results

The theoretical review is consistent with the empirical findings of this study. It was indicated by the respondents that conflict resolution reduces tension among the professionals is the most significant benefit of conflict resolution among construction professionals. As a result of this, once conflict is been resolved professionals in the construction industry can easily and freely
interact and share ideas with others without any form of anxiety. Conflict resolution should always be taken seriously among construction professionals in order to enhance resourceful thinking among the construction professionals.

8.7 RESEARCH QUESTION FIVE (RQ5)

RQ5: What are the factors influencing conflict management in the Nigerian construction industry?

8.7.1 Findings from factors influencing conflict management among construction professionals

The results from the descriptive as well as exploratory factor analysis were used in answering this research question.

Results of descriptive analysis

From the descriptive analysis result on factors influencing conflict management among construction professionals it was discovered that ‘poor leadership styles of professionals’ was ranked first by the respondents with a mean score (M) of 3.98 and standard deviation (SD) of 1.089; ‘inadequate communication among professionals’ was ranked second with (M=3.87; SD=0.960); ‘rudeness amongst the professionals’ was ranked third with (M=3.76; SD=1.073); ‘culture barriers among the professionals’ was ranked fourth with (M=3.68; SD=1.090) and ‘a lack of trust among professionals’ was ranked fifth with (M=3.64; SD=0.988). Furthermore, ‘threatening behaviour among professionals’ was ranked sixth with (M=3.56; SD of 0.913); ‘time pressure among the professionals’ was ranked seventh with a mean score of 3.52 and standard SD of 0.913; ‘inappropriate professionals’ organisational structure’ was ranked eighth with (M=3.41; SD=0.841) and ‘inappropriate professionals’ organisational policy and procedures’ was ranked ninth with (M=3.36; SD =0.878). In addition, ‘lack of professionals gender equality’ was ranked tenth with (M= 3.29; SD=1.057); ‘high stress levels amongst the professionals’ was ranked eleventh with (M=3.27; SD=0.874) and ‘financial problems of the professionals’ was ranked twelfth with (M=3.16; SD=0.899).

From the findings, it was indicated that poor leadership styles of professionals is the most vital factor influencing conflict management among construction professionals. Nanjundeswaras (2014:57) stated that leadership is a common authority procedure whereby the construction
professionals attempt to gain the cooperation of followers in an attempt to reach the organizational goals. Many construction professionals have leaders with challenging leadership styles that may discourage conflict management in the construction industry. Other factors influencing conflict management among construction professionals include inadequate communication among professionals, rudeness amongst the professionals, culture barriers among the professionals, a lack of trust between professionals, threatening behaviour, time pressure among the professionals, inappropriate professional organisational structure, inappropriate professional organisational policy and procedures, lack of professional gender equality, high stress levels amongst the professionals, and the financial problems of the professionals. Hussain et al (2013: 44) states that communication informs and edifies professionals in all positions and inspires them to maintain their conducts. The basis of conflict management is how efficiently professionals communicate. Therefore, if professionals’ communication in the construction industry is not adequate it will affects conflict management among professionals. Furthermore, Doshy and Wang (2014: 30) refers to rudeness as progressively increasing which cause setbacks of tasks in the workplace. It presents as consequences of time wastage in discussions, smoking at the workplace, and which leads to destruction owing to professional’s misconduct in the construction industry. Furthermore, conflict management among construction professionals is usually influenced by a culture that encourages honesty and the exchange of valuable information; a type of learning where motivation is used instead of a stick to enhance professional learning through constructive support. Regarding a lack of trust among professionals, Kwon (2004:5) stated that a lack of trust among construction professionals is a common occurrence as every action needs to be examined as well as demonstrated owing to distrust. However, whenever professionals in the construction industry are not trustworthy, it usually influences conflict management.

**Results from exploratory factor analysis**

Regarding the factor analysis, two factors appeared and they are discussed below.

**Factor one: Inadequate leadership qualities**

A total of seven items were loaded onto factor one. The factor loads as follows: a lack of trust among professionals (0.827), inappropriate professional organisational structure (0.804),
inappropriate professional organisational policy and procedures (0.754), inadequate communication among professionals (0.668), financial problem of the professionals (0.434), Poor leadership styles of professionals (0.433), and threatening behaviour among professionals (0.419), with a total variance of 48.412%. Percentages in parenthesis show the respective factors’ loadings. Four of the items loadings in factor one exceeded 0.60, which specifies that a robust relationship occurs between the items.

The findings revealed that variables in the lack of professional’s political will are highly significant as factors influencing conflict management among construction professionals. These variables include a lack of trust between professionals, inappropriate professional organisational structure, inappropriate professional organisational policy and procedures, inappropriate professional organisational policy, inadequate communication among professionals, and the financial problems of the professionals. Kwon (2004:5) agrees that a lack of trust is among the major factors influencing conflict management. He stated that inadequate trust among construction professionals is a common situation as every action needs to be examined as well as demonstrated owing to distrust. However, whenever professionals in the construction industry are not trustworthy, it usually influences conflict management. Regarding the inappropriate professional organisational structure, the organizations may have structures which may be efficient in nature. One structure could be said to be good or bad but its suitability would depend on the situation regarding the construction professionals. According to Rahim (2002), the structure of an organization includes the hierarchy, procedures, reward systems and many others. However, a change of the organization structure can have a bad influence on the conflict management among construction professionals.

**Factor two: Lack of professionals’ diversity**

A total of five items were loaded onto factor two which was termed ‘lack of professional diversity’ because of a close relation between the items. The factor loads as follows: lack of professional gender equality (0.873), high stress levels amongst the professionals (0.625), culture barriers among the professionals (0.557), rudeness amongst the professionals (0.538), and time pressure among the professionals (0.452), with a total variance of 4.942%. The percentages in parenthesis show individual factors loadings.
The findings show variables under lack of professional diversity which are lack of professional gender equality, high stress levels amongst the professionals, culture barriers among the professionals, rudeness amongst the professionals and time pressure among the professionals as factors influencing conflict management among construction professionals. Regarding lack of gender equality as factor influencing conflict management, construction professionals’ tasks are increasingly more different in terms of gender. The ILO (2008:1) stated that gender roles and equality are generally determined, transform over time as well as space and are subjected to social, cultural and environmental factors. These are typified in the construction industry as different working styles between male and female construction professionals. Furthermore, high stress levels among professionals is a situation whereby professionals are under pressure regarding tasks which can influence conflict management. Regarding cultural barriers, professionals usually find it difficult to change and follow the culture where the leader attempts to change it to ensure one base of culture. When professionals are required to change their culture, they will complain bitterly and create a terrible reputation that will influence the progress of conflict management. Time pressure among professionals was also revealed as a factor influencing conflict management. Cotae (2012) stated that an increase in time pressure upon construction professionals’ performance is an issue that increases conflict among professionals in the construction industry.

8.7.2 Implications of the results

The theoretical review is consistent with the findings of this study. The responses agree with the findings that factors influencing conflict management are poor leadership of professionals, inadequate communication among professionals, rudeness amongst the professionals, culture barriers among the professionals, a lack of trust among professionals, threatening behaviour, time pressure among the professionals, inappropriate professional organisational structure, inappropriate professional organisational policy and procedures, lack of professionals gender equality, high stress levels amongst the professionals, and financial problems of the professionals. The finding revealed that poor leadership among professionals is the most significant factor influencing conflict management among construction professionals. The leadership position should be taken seriously by ensuring that any professional in such position should possess all the qualities of good leadership.
8.8 CONCLUSION
The data acquired from the questionnaires as responded by the participants concerning conflict management among professionals in Nigerian construction industry were presented and analyzed in relation to the research questions and literature review. The next chapter of this research study reviews the objectives in relation to the study findings, showing how the research objectives are met. Also recommendations are presented and discussed in relation to the research objective of this study.
CHAPTER NINE

CONCLUSIONS AND RECOMMENDATIONS

9.1 INTRODUCTION

This chapter presented and discussed the conclusions and recommendations for this study in relation to the research objectives. A general research conclusion is also presented based on the conclusions drawn from each of the research objectives.

9.2 CONCLUSIONS

Below are the objectives as well as an indication of how these objectives were met in order to achieve the aims of this research:

1. To investigate factors that cause conflict among the construction professionals in the Nigerian construction industry,
2. To assess the impacts of construction professionals’ conflict on the performance of the Nigerian construction industry;
3. To assess methods of resolving conflicts among construction professionals in the Nigerian construction industry;
4. To assess the benefits of conflict resolution among construction professionals in the Nigerian construction industry; and
5. To assess factors influencing conflict management among construction professionals in the Nigerian construction industry.

9.2.1 Conclusions for Research Objective 1

- To investigate factors that cause conflict among the construction professionals in the Nigerian construction industry

From the reviewed literature, it was determined that the following differences in levels of education, indiscipline, role ambiguity, change order among professionals and favouritism among professionals are the identified factors that cause conflict among construction professionals. Therefore construction professionals have many roles to play in order to avoid various causes of conflict among construction professionals in Nigeria.

Findings from the questionnaire survey results gotten from the respondents revealed that favouritism among professionals, role ambiguity, differences in professionals’ experiences,
differences in levels of education, differences in personalities, differences in professional goals and views, poor decision making among professionals and indiscipline among professionals are the top eight amongst various factors that cause conflict among construction professionals in Nigerian construction industry. Results from the factor analysis also revealed that differences in levels of education, differences in professional goals and views, differences in professionals’ experiences, role ambiguity, indiscipline among professionals, differences in personalities, and favouritism among professionals in the industry are the most significant factors that cause conflict among construction professionals. Therefore, the research objective was achieved both from the literature and the structured questionnaire.

9.2.2 Conclusion for Research Objective 2

- To assess the impacts of construction professionals’ conflict on performance in the Nigerian construction industry

Findings from the literature review recognized that the following are the general impacts of construction professionals’ conflict on performance in the Nigerian construction, namely conflict enhances creativity among professionals, conflict helps professionals in early problem identification, conflict reduces communication among professionals, and conflict leads to the abandonment of professionals’ work, conflict elicits ideas for innovation among professionals, and conflict led to frustration of professionals. The literature shows that conflict can have good impacts if it is managed well; however, conflict can also have bad impacts if it is not managed well. Therefore the impacts of construction professionals’ conflict on performance were generalized in the literature review.

Results from the questionnaire survey indicate that there are ten main impacts of construction professionals’ conflict on performance among construction professionals in Nigeria industry, namely conflict leads to the abandonment of professionals’ work, conflict reduces communication among construction professionals, conflict creates job pressure, conflict leads to frustration regarding professionals’ carrying out their work, conflict creates displeasure among professionals, conflict helps in early problem identifications, conflict among professionals causes work damage, conflict helps in solving professionals’ organizational problems, conflict improves productivity and conflict helps in professionals’ sharing ideas.
Results from the factor analysis revealed that conflict improves communication, conflict helps professionals to share ideas, conflict improves the productivity of professionals, conflict enhances creativity among professionals, conflict elicits ideas for innovation among professionals: these were identified as impacts of construction professionals’ conflict in the Nigerian construction industry. Conclusively, it can be said that the research objective for this study has been achieved.

9.2.3 Conclusion for Objective 3

- To assess methods of resolving conflict among the construction professionals in the Nigerian construction industry

From the findings from the reviewed literature, the following were established as methods of resolving conflict among construction professionals in Nigeria, namely dominating, compromising among the professionals, collaboration, mediating, confronting and accommodating.

Results from the questionnaire survey indicate that the top seven methods of resolving conflict among construction professionals are collaborating, accommodating, negotiating, compromising among the professionals, mediating, arbitrating, mediating-arbitrating, and contending. Results from the factor analysis also revealed the most significant methods of resolving conflict among construction professionals in Nigeria as mediating, arbitrating, negotiating, early neutral evaluation, mediating-arbitrating, obliging, avoiding, dominating, contending, and compromising among the professionals. Hence, the objective of this research was achieved both from the literature and the structured questionnaire.

9.2.4 Conclusion for Objective 4

- To assess the benefits of conflict resolution among the construction professionals in the Nigerian construction industry

From the reviewed literature, it was recognized that the benefits of conflict resolution among construction professionals are that conflict resolution generates new insight/perceptions, conflict resolution reduces tension among professionals, and conflict resolution helps professionals to accomplish their ambitions. Moreover, it was stated in the literature that once conflict has been
resolved among construction professionals, it creates many benefit which enhance professionals’ performance in the construction industry.

Findings from the questionnaire survey results gotten from the respondents revealed the eight most important benefits of conflict resolution among professionals in the Nigerian construction industry, namely conflict resolution generates new insights/perceptions, conflict resolution reduces tension among professionals, conflict resolution helps professionals to accomplish their ambitions, conflict resolution improves the workplace conflict management skills of professionals, conflict resolution reduces the task ambiguity of professionals, conflict resolution builds team cohesion (teamwork), conflict resolution enhances commitment to work among the professionals and conflict resolution builds relationships among professionals. Also, results from the factor analysis revealed the six most significant amongst benefits of conflict resolution among construction professionals in Nigeria. These are conflict resolution reduces tension among professionals, conflict resolution reduces the task ambiguity of professionals, conflict resolution generates new insights/perceptions, conflict resolution enhances commitment to work among the professionals, conflict resolution helps professionals to accomplish their ambitions, conflict resolution improves the workplace conflict management skills of professionals and conflict resolution builds relationships among professionals. Therefore, it can be conclusively said that the research objective four for this study has been answered.

9.2.5 Conclusion for Research Objective 5

- To assess factors influencing conflict management among the construction professionals in the Nigerian construction industry

From the literature review, it was established that factors influencing conflict management among construction professionals in the Nigerian construction industry were identified as culture barriers among construction professionals, a lack of trust, inadequate communication among professionals and poor leadership styles of professionals.

Results from the questionnaire survey obtained from the respondents’ shows seven most significant factors influencing conflict management among construction professionals in Nigeria were revealed. These are poor leadership styles of professionals, inadequate communication among professionals, rudeness amongst professionals, culture barriers among professionals, a
lack of trust among professionals, threatening behaviour among professionals and time pressure among professionals. Results from the factor analysis revealed also revealed some factors influencing conflict management among professionals in Nigerian construction industry, namely a lack of trust among professionals, inappropriate professional organizational policy and procedure, inadequate communication among professionals, financial problems, poor leadership among professionals and threatening behaviour among professionals. Therefore, it can be seen that this objective of the research has been achieved.

9.3 GENERAL RESEARCH CONCLUSIONS

The main purpose of this study is the assessment of conflict management among professionals in the Nigerian construction industry by ascertaining factors that cause conflict among construction professionals, the impacts of construction professionals’ conflict on performance, methods of resolving conflict among construction professionals, benefits of conflict resolution among construction professionals and factors influencing conflict management among professionals in the Nigerian construction industry. This aim was achieved through the data collected from a structured questionnaire, and also from the methodology used for the research study.

The conclusions drawn from this research are as follows:

- Conflict among professionals in the Nigerian construction industry is mainly caused by the following factors: favouritism among professionals, role ambiguity, differences in professionals’ experiences, differences in levels of education, differences in personalities, differences in professionals’ goals and views, poor decision making among professionals and indiscipline among professionals. These factors are rendering construction professionals unproductive and reducing professionals’ efficiency in performance. It is therefore imperative for construction professionals to ensure full avoidance of those factors that lead to conflict among them in the Nigerian construction industry.

- Conflict among construction professionals in Nigeria has impacts on professionals’ performance in the construction industry. Among the dysfunctional impacts of construction professionals’ conflict is the fact that conflict leads to the abandonment of professionals’ work, conflict reduces communication among construction professionals and conflict creates job pressure. However, the functional impacts are that conflict helps
professionals to share ideas, and conflict improves the productivity of professionals. If conflict among construction professionals is managed appropriately it will be beneficial but if conflict is not managed well, it will be dysfunctional in nature.

- Construction professionals in Nigeria must take into consideration the use of the following methods in resolving conflict in the construction industry, namely collaborating, accommodating, negotiating, compromising among the professionals, mediating, arbitrating, mediating-arbitrating, and contending. The use of those methods will improve professionals’ mutual communication and productivity in the construction industry.

- The benefits of conflict resolution generates new insights/perceptions among professionals, reduces tension among professionals, helps professionals to accomplish their ambitions, improves the workplace conflict management skills of professionals, reduces the task ambiguity of professionals, and builds team cohesion (teamwork). This can only be achieved among the professionals if they resolve conflict appropriately and collaboratively.

- Construction professionals frequently find it difficult to manage conflict owing to poor leadership, inadequate communication, rudeness, and cultural barriers among professionals. The leadership position should be taken seriously by ensuring that any professional in such a position should possess all the qualities of good leadership.

9.4 RECOMMENDATIONS
This research study has assessed conflict management among professionals in the Nigerian construction industry. The study identified factors that cause conflict among construction professionals, the impacts of construction professionals’ conflict on performance, methods of resolving conflicts among construction professionals, the benefits of conflict resolution and factors influencing conflict management among construction professionals in Nigeria. Therefore, the following are the proposed recommendations:

- It is recommended that construction professionals must avoid and desist from any factors that can cause conflict among them. If this is considered among professionals, construction professionals in Nigeria will be free to share ideas and views with other professionals. This will lead to improvements on professional’s tasks.
• It is also recommended that construction professionals should communicate more with one another in order to facilitate good conflict impacts on their performance in the Nigerian construction industry.

• It is recommended that construction professionals should ensure adequate use of methods in resolving conflict with other professionals in the construction industry for the improved development of professionals’ daily activities.

• For construction professionals to enjoy the benefits of conflict resolution in the construction industry they must resolve conflicts among themselves as early as possible.

• It is recommended that construction professionals should ensure that their leaders possess all the qualities of good leadership. This will help professionals in managing conflict successfully in the Nigerian construction industry.

9.5 RECOMMENDATION FOR FURTHER STUDIES
This research study recommends the following areas for further studies:

• Further research can make use of other data analysis methods such as multiple regressions in order to understand the relationship between variables from the data gotten through a structured questionnaire survey.

• Future research could investigate the perceptions of construction professionals regarding challenges facing the use of collaborating method in resolving conflict in the Nigerian construction industry.

• Further study can assess the impact of collaborating as a method of resolving conflict among construction professionals in Nigeria.
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**APPENDIX-A: QUESTIONNAIRE COVER LETTER**

University of Johannesburg,
Department of Construction management and Quantity surveying,
Doornfontein, 2028.
September 2018.

TO WHOM IT MAY CONCERN

Dear Sir/Mam,

LETTER OF INVITATION FOR RESEARCH SURVEY

The Department of Construction Management and Quantity Surveying, University of Johannesburg is undertaking a research project on the “Assessment of Conflict Management among Professionals in the Nigerian Construction Industry”.

We kindly request you to complete the following short questionnaire. It should take no longer than 20 minutes of your time. Your response is very important to us. Please do not write your name or contact details on the questionnaire.

The Summary of the results of this research will be available at the Department of Construction Management and Quantity Surveying, University of Johannesburg in December, 2018.

In case if there are any queries or comments regarding this survey, you are welcome to contact me on +27786398170 or email me at adeyemibensunkanmi@yahoo.com.

Thanks for your cooperation,

Adeyemi, B.S.

APPENDIX B: QUESTIONNAIRE SAMPLE

QUESTIONNAIRE ON THE ASSESSMENT OF CONFLICT MANAGEMENT IN THE NIGERIAN CONSTRUCTION INDUSTRY: INSTRUCTIONS:

Example of how to complete this questionnaire

Your gender? If you are male

Male

Female

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SECTION A - BACKGROUND INFORMATION

This section of the questionnaire refers to the background or biographical information. Although we are aware of the sensitivity of the questions in this section, the information will allow us to compare groups of respondents. We assure you that your response will remain anonymous. Your cooperation is appreciated. Thank you.

1. What is your profession in the Nigerian construction industry?

<table>
<thead>
<tr>
<th>Profession</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architect</td>
<td>1</td>
</tr>
<tr>
<td>Builder</td>
<td>2</td>
</tr>
<tr>
<td>Civil Engineer</td>
<td>3</td>
</tr>
<tr>
<td>Quantity Surveyor</td>
<td>4</td>
</tr>
<tr>
<td>Construction Manager</td>
<td>5</td>
</tr>
<tr>
<td>Project Manager</td>
<td>6</td>
</tr>
</tbody>
</table>

2. What is your age group?

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 years – 25 years</td>
<td>1</td>
</tr>
<tr>
<td>26 years – 30 years</td>
<td>2</td>
</tr>
<tr>
<td>31 years – 35 years</td>
<td>3</td>
</tr>
<tr>
<td>36 years – 40 years</td>
<td>4</td>
</tr>
<tr>
<td>41 years – 45 years</td>
<td>5</td>
</tr>
<tr>
<td>46 years – 50 years</td>
<td>6</td>
</tr>
<tr>
<td>51 years – 55 years</td>
<td>7</td>
</tr>
<tr>
<td>Above 56 years</td>
<td>8</td>
</tr>
</tbody>
</table>

3. How many years of experience do you have in the Nigerian construction industry?

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 years</td>
<td>1</td>
</tr>
<tr>
<td>6-10 years</td>
<td>2</td>
</tr>
<tr>
<td>11-15 years</td>
<td>3</td>
</tr>
<tr>
<td>16-20 years</td>
<td>4</td>
</tr>
<tr>
<td>More than 20 years</td>
<td>5</td>
</tr>
</tbody>
</table>
4. What is your highest level of educational qualification?

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary National Diploma (OND)</td>
<td>1</td>
</tr>
<tr>
<td>Higher National Diploma (HND)</td>
<td>2</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>4</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>5</td>
</tr>
<tr>
<td>Doctorate</td>
<td>6</td>
</tr>
</tbody>
</table>

5. How would you describe the incidence (number) of conflicts you have experienced with other professionals in the construction industry?

<table>
<thead>
<tr>
<th>Incidence</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>None at all</td>
<td>0</td>
</tr>
<tr>
<td>Very low incidence</td>
<td>1</td>
</tr>
<tr>
<td>Low incidence</td>
<td>2</td>
</tr>
<tr>
<td>Moderate incidence</td>
<td>3</td>
</tr>
<tr>
<td>High incidence</td>
<td>4</td>
</tr>
<tr>
<td>Very high incidence</td>
<td>5</td>
</tr>
</tbody>
</table>

6. How would you describe the intensity of the conflicts you have experienced with other professionals in the construction industry?

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>None at all</td>
<td>0</td>
</tr>
<tr>
<td>Very low intensity</td>
<td>1</td>
</tr>
<tr>
<td>Low intensity</td>
<td>2</td>
</tr>
<tr>
<td>Moderate intensity</td>
<td>3</td>
</tr>
<tr>
<td>High intensity</td>
<td>4</td>
</tr>
<tr>
<td>Very high intensity</td>
<td>5</td>
</tr>
</tbody>
</table>

**SECTION B: FACTORS THAT CAUSE CONFLICT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY**

This section of the questionnaire assesses factors that could cause conflict among professionals in the Nigeria construction industry.

Using a 5-point Likert scale where
1 = To no extent; 2 = To a little extent; 3 = To a moderate extent; 4 = To a large extent; 5 = To a
very large extent

7 Based on your experience, to what extent do each of the following factors cause conflict among professionals?

<table>
<thead>
<tr>
<th>S/N</th>
<th>Factors that could cause conflict among construction professionals</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC-1</td>
<td>Indiscipline among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-2</td>
<td>Differences in professional goals and views</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-3</td>
<td>Differences in personalities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-4</td>
<td>Poor working conditions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-5</td>
<td>Poor dissemination of information</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-6</td>
<td>Inappropriate administrative style of professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-7</td>
<td>Favouritism among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-8</td>
<td>Differences in level of education</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-9</td>
<td>Change order among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-10</td>
<td>Lack of coordination among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-11</td>
<td>Poor decision making by professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-12</td>
<td>Financial problems of professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-13</td>
<td>Differences in professionals experiences</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-14</td>
<td>High dependency on other professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FCC-15</td>
<td>Role ambiguity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**SECTION C: IMPACTS OF CONSTRUCTION PROFESSIONALS’ CONFLICTS ON THE PERFORMANCE OF THE NIGERIAN CONSTRUCTION INDUSTRY**

This section of the questionnaire assesses the impacts of construction professionals’ conflict on performance in the Nigerian construction industry.

Using a 5-point Likert scale where 1 = To no extent; 2 = To a little extent; 3 = To a moderate extent; 4 = To a large extent; and 5 = To a very large extent

6. Below is a list of possible impacts that can arise from construction professionals’ conflict. Based on your experience indicate the extent to which each impact has occurred as a result of
conflict.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Impacts of conflict amongst construction professionals on performance</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICP-1</td>
<td>Conflict created better trust among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-2</td>
<td>Conflict improved productivity of professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-3</td>
<td>Conflict enhanced creativity among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-4</td>
<td>Conflict enhanced resourceful thoughts of professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-5</td>
<td>Conflict helped professionals to share opinions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-6</td>
<td>Conflict improved communication among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-7</td>
<td>Conflict brought ideas for innovation among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-8</td>
<td>Conflict helped in early problem identification</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-9</td>
<td>Conflict helped in solving professional organisation problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-10</td>
<td>Conflict created jobs pressure among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-11</td>
<td>Conflict created displeasure among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-12</td>
<td>Conflict created climate of mistrust among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-13</td>
<td>Conflict increased resistance to transformation among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-14</td>
<td>Conflict affected professionals’ organization commitment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-15</td>
<td>Conflict led to abandonment of professionals’ work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>ICP-16</td>
<td>Conflict led to frustrations professionals in carrying out their work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
ICP-17 | Conflict caused work damages among professionals | 1 | 2 | 3 | 4 | 5  
ICP-18 | Conflict affected professionals’ morale | 1 | 2 | 3 | 4 | 5  
ICP-19 | Conflict destroyed emotional well-being of professionals | 1 | 2 | 3 | 4 | 5  

SECTION D: METHODS OF RESOLVING CONFLICT AMONG CONSTRUCTION PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

This part of the questionnaire assesses the methods of resolving conflicts among the construction professionals.

Using a 5-point Likert scale where
1 = To no extent; 2 = To a little extent; 3 = To a moderate extent; 4 = To a large extent; 5 = To a very large extent

7. Based on your experience, to what extent do you use the following methods of resolving conflicts?

<table>
<thead>
<tr>
<th>S/N</th>
<th>Methods of resolving conflict among construction professionals</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRC-1</td>
<td>Avoiding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-2</td>
<td>Contending</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-3</td>
<td>Accommodating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-4</td>
<td>Negotiating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-5</td>
<td>Mediating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-6</td>
<td>Arbitrating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-7</td>
<td>Mediating-Arbitrating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-8</td>
<td>Early neutral evaluating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-9</td>
<td>Obliging</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-10</td>
<td>Dominating</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MRC-11</td>
<td>Compromising among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
This section of the questionnaire assesses the benefits of conflict resolution (CR) among construction professionals in the Nigerian construction industry. Using a 5-point Likert scale where
1= To no extent; 2 =To a little extent 3 = To a moderate extent; 4 = To a large extent; 5 = To a very large extent

Below are possible benefits of resolving conflict among construction professionals in the Nigeria construction industry. Based on your experience, to what extent does each of the following benefits occur as a result of practising conflict resolution (CR)?

<table>
<thead>
<tr>
<th>S/N</th>
<th>Benefits of conflict resolution</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRC-1</td>
<td>Conflict resolution builds relationships among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-2</td>
<td>Conflict resolution helps professionals to accomplish their ambitions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-3</td>
<td>Conflict resolution enhances commitment to work among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-4</td>
<td>Conflict resolution generates new insights/perceptions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-5</td>
<td>Conflict resolution builds team cohesion (teamwork)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-6</td>
<td>Conflict resolution leads to restructuring professionals’ organisational policy and procedure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-7</td>
<td>Conflict resolution reduces task ambiguity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRC-8</td>
<td>Conflict resolution improves workplace conflict management skills of</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
SECTION F: FACTORS INFLUENCING CONFLICT MANAGEMENT AMONG PROFESSIONALS IN THE NIGERIAN CONSTRUCTION INDUSTRY

This part of the questionnaire evaluates factors influencing conflict management among construction professionals in the Nigerian construction industry.

Using a 5-point Likert scale where

1 = To no extent; 2 = To a little extent; 3 = To a moderate extent; 4 = To a large extent; 5 = To a very large extent

9. Based on your experience, to what extent do each of the following challenges prevent the successful practice of conflict management amongst professionals?

<table>
<thead>
<tr>
<th>S/N</th>
<th>Factors hampering successful conflict management amongst construction professionals</th>
<th>To no extent</th>
<th>To a little extent</th>
<th>To a moderate extent</th>
<th>To a large extent</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIC-1</td>
<td>Poor leadership styles of professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-2</td>
<td>Culture barriers among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-3</td>
<td>Inappropriate organisational structure for professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-4</td>
<td>Inappropriate policy and procedures for professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-5</td>
<td>Time pressure among the professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-6</td>
<td>Threatening behaviour among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-7</td>
<td>A lack of trust among professionals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>FIC-8</td>
<td>Rudeness amongst the professionals</td>
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<td>Lack of gender equality amongst professionals</td>
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<td>Inadequate communication among professionals</td>
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THANK YOU FOR YOUR COOPERATION