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Claims Management and Substantiation in the United Arab Emirates Construction Sector

إدارة وتدعيم المطالبات في قطاع الإنشاءات في دولة الإمارات العربية المتحدة

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Abstract

Many construction companies operating in the United Arab Emirates face a number of constraints which negatively affect the execution of projects. Such constraints have a direct effect on the cost and time factors of the project. Independent of the constraints perceived, the difficulties in completing projects in a timely manner lead contractors to formulate claims in an effort to maintain their contractual rights and in an attempt to avoid penalties specified in the contracts. This dissertation aimed at developing a claims management system which can be applied by contractors to ensure that their claims were substantiated adequately. To gain a better understanding of claims, types of claims and substantiation were all factors which were reviewed in an attempt to enable contractors to further grasp the knowledge required to establish a well-structured claims management system. This was achieved through developing a conceptual framework which contained all the concepts claims management revolved around. The study was of qualitative nature and the tools used were based on semi-structured interviews and case study approach. The construction company which was referred to as part of the analysis was called ABC. Interviews were held with professionals working in construction organizations and who were directly involved in the claims which surfaced in their projects. The study provided in the conclusion the necessary elements which construction firms need to take into consideration when formulating their claims. The managerial aspect was the focus of the study rather than the legal aspect. Some of the findings revealed in this dissertation were the importance of records keeping, formal notifications and significance of change and change orders in the context of claims management and other key aspects relevant to the field of claims management and substantiation.

Keywords: Claims, management, substantiation, United Arab Emirates, contractors, legal, managerial, qualitative, formulating, change orders

المخلص

تواجه العديد من شركات الإنشاءات العاملة في الإمارات العربية المتحدة قيوداً تؤثر سلباً على تنفيذها للمشاريع. تؤثر هذه القيود مباشرة في عاملي الوقت وتكلفة المشروع، علاوة على القيود المرئية فإن المصاعب في إكمال المشاريع بأوقاتها المحددة دعت المقاولين لصياغة مطالبات من أجل حفظ حقوقهم الإنشائية وتفاذي أية أضرار قد تتجم عن الغرامات المنصوص عليها في العقود، هدفت هذه الأطروحة إلى تطوير نظام لإدارة المطالبات ليستخدمه المقاولون لضمان تثبيت مطالباتهم كاملة، من أجل فهم أفضل لهذه المطالبات لقد تمت مراجعة العديد من هذه المطالبات والادلة المقدمة لاثباتها كعوامل لتمكين المقاولين من المعرفة اللازمة لتأسيس نظام هيكلي لإدارة هذه المطالبات. هذه الدراسة نوعية في طبيعتها والوسائل المستخدمة فيها تعتمد على مقابلات شبه هيكلية ومنهج دراسة الحالة. الشركة المعتمدة كجزء من هذا التحليل تسمى ABC. كما عقدت مقابلات مع محترفين يعملون في هيئات البناء المنخرطة كلياً بالمطالبات التي ظهرت في مشاريعهم. قدمت هذه الدراسة في النهاية كل العوامل اللازمة لشركات البناء والتي ستستخدمها عند صياغة هذه المطالبات. لقد كان الجزء الإداري محور بحث هذه الدراسة وليس العامل القانوني. من أهم النتائج التي توصلت إليها هذه الدراسة هي أهمية حفظ السجلات. التبليغ الرسمي، وأهمية التغيير والامور التغييرية في صلب إدارة المطالبات والعديد من الجوانب الأخرى في مجال إدارة المطالبات والدلائل الثبوتية.

الكلمات الدالة: مطالبات، ادارة، الادلة الثبوتية، الامارات العربية المتحدة، المقاولين، قانوني، إداري،
الامور التغييرية نوعية، صياغة،

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Dedication

I dedicate my work to all those who have stood beside me and they are...

My Parents Dr. Maher Zubaida and Dr. Mary Zubaida...

Who have been a source of motivation and inspiration over the years.

My beloved wife Amal...

For her constant moral support, love and encouragement during my studies at the British University in Dubai. I couldn't have made it without her.

And my precious daughter Lama...

Whose joy and laughter lightened my burden immeasurably when the going got tough!

My supervisor Dr. Arun Bajracharya...

For being, in addition, my mentor and friend during my journey in BUID and to whose endless patience and advice I credit the success with which I was able to negotiate the rocky path of a novice researcher.

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I would also like to dedicate my work to my friends for just being there for me whenever I needed to unwind....

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Table of Contents

Abstract	2
Acknowledgements	4
Dedication	5
List of Figures	9
List of Tables.....	10
Abbreviations	11
CHAPTER ONE–INTRODUCTION	12
1.1Background	12
1.2 Statement of the Problem	14
1.3 Aim and Objectives	15
1.4 Scope of the Research	16
1.5 Research Questions	18
1.6 Research Structure.....	19
CHAPTER TWO – LITERATURE REVIEW	20
2.1 Introduction.....	20
2.2 Definition of Claims.....	20
2.3 Types of Claims	21
2.3.1 Extension of Time (EOT) Claims.....	22
2.3.2 Prolongation Claims	27
2.3.3 Acceleration Claims	28
2.4 Causes and effects of Claims in construction	30
2.5 Claims Management	32
2.6 FIDIC Views on Claims.....	36
2.7 Delay Analysis Methods	37
2.8 Change and Change orders	40
2.9 Records and Documentation	43

2.10 Contract Administration.....	46
2.11 The Role of the Engineer in claims assessment and evaluation	47
CHAPTER THREE –THE CONCEPTUAL FRAMEWORK	49
3.1 Introduction.....	49
3.2 Claims Management Conceptual Framework	49
3.3 Current Claims Management Practices	51
3.4 Critical Success Factors for Claims Management	53
3.5 Chapter Summary.....	56
CHAPTER FOUR– METHODOLOGY	58
4.1 Introduction.....	58
4.2 Research Approach	59
4.3 Case Study Research	60
4.4 The Interviews Structure.....	61
4.5 The Data Collection.....	62
4.6 Validity and Reliability	64
CHAPTER FIVE–DATA ANALYSIS, RESULTS AND FINDINGS.....	65
5.1 Introduction.....	65
5.2 ABC Construction Company	66
5.3 Analysis- Project A.....	68
5.3.1 Analysis-Case 1-Interviewee 1	71
5.3.2 Analysis-Case 1-Interviewee 2	75
5.3.3 Identified Similarities and Differences	78
5.4 Analysis- Project B	79
5.4.1 Analysis-Case 2- Interviewee 1	81
5.4.2 Analysis-Case 2- Interviewee 2	84
5.4.3 Identified Similarities and Differences	86
5.5 Analysis- Project C.....	87
5.5.1 Analysis-Case 3 – Interviewee 1.....	88
5.5.2 Analysis-Case 3- Interviewee 2	91

5.5.3 Identified Similarities and Differences	93
5.6 Cross Case Analysis.....	94
5.6.1 Identified Similarities	94
5.6.2 Identified Differences	95
5.7 Chapter Summary.....	96
CHAPTER SIX– CONCLUSIONS AND RECOMMENDATIONS	104
6.1 Conclusions.....	104
6.2 Recommendations	105
6.3 Limitations of the Study	106
6.4 Recommendations for Future Research.....	107
REFERENCES.....	108
APPENDICES.....	115
APPENDIX (A) Student Declaration Form	115
APPENDIX (B) – THE INTERVIEW QUESTIONS STRUCTURE	115
APPENDIX (C) Project A Organization Chart	119
APPENDIX (D) Project B Organization Chart	120
APPENDIX (E) Project C Organization Chart	121

List of Figures

Figure 1-1 The owner, architect, and contractor triangle	17
Figure 2-1 EOT Claims Formulation	23
Figure 2-2 A basic data flow diagram for contractor side estimation of time extension claims	25
Figure 2-3 Causes of Claims.....	30
Figure 2-4 Claims Management Lifecycle.....	33
Figure 2-5 Types of Delays and Concurrency	34
Figure 2-6 Causes of Delay	38
Figure 2-7 Delay Analysis Procedures	39
Figure 2-8 Proper and Improper Records Management	45
Figure 2-9 General Sequence of Claims Procedure Under the Red Book.....	47
Figure 2-10 Construction Dispute Resolution Steps	48
Figure 3-1 Concepts Reviewed in the Research of Claims Management	50
Figure 4-1 The Contractual Framework of Claims Management (The Idealistic View Model).....	57
Figure 5-1 The Analysis Procedures.....	67

List of Tables

- Table 1-1 The Projects and Contract Types.....	17
- Table 2-1 The FIDIC Clauses relevant to Claims.....	36
- Table 2-2 Ranking the cause of claims and the frequency.....	41
- Table 4-1 Table of the Interviewees.....	62
- Table 4-2 The Documents retrieved from ABC projects.....	63
- Table 5-1 ABC targeted projects	65
- Table 5-2 Project A features.....	68
- Table 5-3 Project A General Information feedback.....	78
- Table 5-4 Project B Features.....	79
- Table 5-5 Summary of Claims Management Elements.....	97
- Table 5-6 The Role of the Engineer and FIDIC.....	98
- Table 5-7 The Aspects of Record Keeping	98
- Table 5-8 Identified Change and Change Management Elements.....	99
- Table 5-9 Summary of Lessons Learnt.....	100
- Table 5-10 Critical Success Factors versus Literature versus Interviewees Feedback.....	101
- Table 5-11 Critical Failure Factors versus Literature versus Interviewees Feedback.....	102

Abbreviations

ADR	Alternative Dispute Resolution
AED	Arab Emirates Dirham
CFE	Critical Failure Factors
CHP	Claim Handling Process
CMS	Claims Management System
CFE	Critical Failure Factors
CSF	Critical Success Factors
EOT	Extension of time
FIDIC	Fédération Internationale Des Ingénieurs-Conseils
FTP	File Transfer Path
LD	Liquidated Damages
MENA	Middle East and North Africa
PMI	Project Management Institute
UAE	United Arab Emirates

CHAPTER ONE–INTRODUCTION

1.1 Background

In the most recent years, the United Arab Emirates construction industry has witnessed remarkable progress. The demand for housing, infra-structure and entertainment projects lead to the appearance of mega projects which were complex and of great value. With this complexity came the need for fast tracking which usually results in rework, change orders and site modifications (Moazzami et al., 2011).Accordingly, there was a need to have proper contracts put forward to allocate the risk between the owner, the contractor, and the designer (Arditi and Patel, 1989).

The majority of construction projects comprise of binding agreements or contracts that are drawn up for the sake of minimizing conflicts and disputes at the execution level or post completion of these projects. These contracts are usually signed between the two main parties: an Employer or Owner and a Contractor who undertakes the execution of that particular project. Such a contract includes general clauses and specific clauses which govern the relationship between the Employer and the Contractor.

In the United Arab Emirates, FIDIC (International Federation of Consulting Engineers) is the known form of contract used to administer construction contracts. Many of the clauses included in construction contracts are directly extracted from FIDIC which Employers greatly rely on in the UAE. FIDIC acknowledges an additional involved party which is known as the Engineer. The Engineer's essential role is to administer the contract impartially between the Employer and the Contractor. Other additional roles played by the Engineer might include the design and supervision of the executed works.

Once the works are awarded to the Contractor via the proper form of a letter of intent and signed contract document, the contractor engages within a duration of 14 days in providing what is defined by (FIDIC,1987) as clause 14 baseline program. This work program is a very crucial document that is subsequently used to evaluate

delay caused, regardless of the party responsible, and becomes the basis on which the claim put forward by the contractor against the client or vice versa is substantiated. The process involves the investigation of the reasons behind the delay whereby a comparison is conducted between the impacted program and the baseline to determine the amount of time the contractor might be entitled to.

At the initiation and execution phases of the project, the contractor engages in monitoring his progress against the baseline program. Whenever a delay occurs, the planning department signals an alert to the project manager on the occurrence of the delay, and accordingly, a recovery plan is determined and the baseline is updated if deemed necessary by the Contractor, in order to get the approval of the Engineer and the Employer.

Construction claims in the United Arab Emirates are common in almost every construction project and are direct results of the rapid growth in the construction industry (Zaneldin, 2005). Therefore, the occurrence of claims is a commonality perceived in many construction projects and can be attributed to a set of factors which can cause considerable delays in a project and consequently result in a rapid increase in that project costs.

Claims seem to be almost inevitable in mega construction projects executed within short durations. This is because almost all construction projects are either cost or time overrun due to many factors or reasons which can either be a breach resulting of the Employer or the Contractor or both. Claims therefore may occur as the result of cost overrun, design errors and omissions, delay damages, numerous change orders, construction rework and modifications, and overlooked work assigned to no party (Moazzami et al., 2011).

The causes of claims identified by (Moazzami et al., 2011) will be further examined in the literature review chapter and conceptual frame work of this dissertation. The emphasis on causes of claims will also be reiterated in the analysis

chapter due to the importance of this element on claims management and substantiation.

1.2 Statement of the Problem

As mentioned earlier in this chapter, almost all construction projects of considerable contract values and significance face delays and cost overrun. This is due to the fact that during certain phases or all phases of a project, certain constraints are imposed by the Employer, Engineer or the Contractor's ineffectiveness which lead to the occurrence of delays. These delays urge the Contractor to tender claims which are either related to time, cost or both. This is due to the dominance of the Employer as a contract party, who leaves the Contractor with no other option but to protect his interests by preventing any liquidated damages or penalties imposed by the Employer due to fear or doubt that the delivery of the project within the agreed time frame and budget may not be achieved. Regardless of the resulting impact, a claim will surface and the Contractor will need to substantiate and justify his claim. In most contract forms, the entitlement made by the Contractor is valid if the contractor is able to establish his case with proper support and substantiation.

Management and substantiation of claims is considered as very essential and fundamental in the construction industry. This may be attributed to the fact that few research projects have been reported, which target the auditing of an overall claims management process in the context of identifying deficiencies, ranking their significance and proposing solutions (Ren et al., 2001). The more convincing the claim, the closer the Contractor is to achieving his target by being guaranteed additional monies or time to cover losses and moreover providing a shield against counter claims or penalties imposed by the Employer.

In this research, the fact that the researcher was working within a construction company referred to as ABC has made this research more tangible and practical. The involvement of ABC firm in projects which had incurred claims greatly contributed to the availability of data necessary to fulfil the research covering claims management and substantiation. The involvement of the researcher may have not been direct as

other members of the organization on the various projects, yet being a witness to the events as part of the team which worked in these projects, he deemed the issue of claims management as being of crucial importance and one which needed to be addressed specifically in the UAE market.

By observing the processes and events which took place, the researcher was able to present this research as an attempt to understand construction claims and the management from a managerial perspective rather than merely approaching it from a contractual perspective. The observation process over the years of executing projects in ABC further helped in understanding the practices of co-workers and the management's strategy whilst handling and managing claims. In this observation process behaviour, responses and setbacks were all indirectly observed and recorded for the purposes of research and advice on betterments to this vast field within project management.

1.3 Aim and Objectives

The prime aim of this study is to explore and how construction claims are managed and substantiated by contractors in the United Arab Emirates. This aim can be achieved by covering the following objectives:

- 1- Investigating features of enhanced claim management systems.
- 2- Investigating the claims management in the UAE and current practices by construction professionals.
- 3- Reviewing and investigating the various types of claims known to construction practitioners and the nature of each type.
- 4- Investigating the shortcomings of the current practices in claims management and ways of their enhancement and betterment.
- 5- Conducting a case study analysis on real life projects which encountered contractual claims.

1.4 Scope of the Research

The importance of this research lies in the fact that it provides guidance to Contractors on the methods by which contractual claims are substantiated and consequently managed in the construction sector. The research is undertaken in the UAE and is based on construction projects executed by a leading construction company referred to earlier as ABC. ABC has encountered claims and rights due to various reasons in different projects which are yet to be settled with the Employers.

The dissertation will cover three projects recently executed in the UAE and are located particularly in Abu Dhabi and Fujairah. In these projects, claims have evolved as a direct result of delays and changes imposed by the Employer and the Engineer. In the three claims, the Contractor had to demonstrate his entitlement for both additional time and cost. From these, certain insights can be gained which might be of considerable assistance in improving the methods by which claims are managed and substantiated.

Two perspectives will be considered for management of claims management. They are the legal/contractual perspective and the managerial perspective. An integrated approach will be introduced to allow for an enhanced claims management system which can operate throughout the lifecycle of the project rather than towards the conclusion of that particular project. This research work targets the construction sector and involves three main stakeholders who form parties in a construction contract, and are defined in (Winkler and Chiumento2009, p.13) in Figure 1-1:

- 1- The Employer or Owner.
- 2- The Engineer/Design Professional.
- 3- The Contractor.

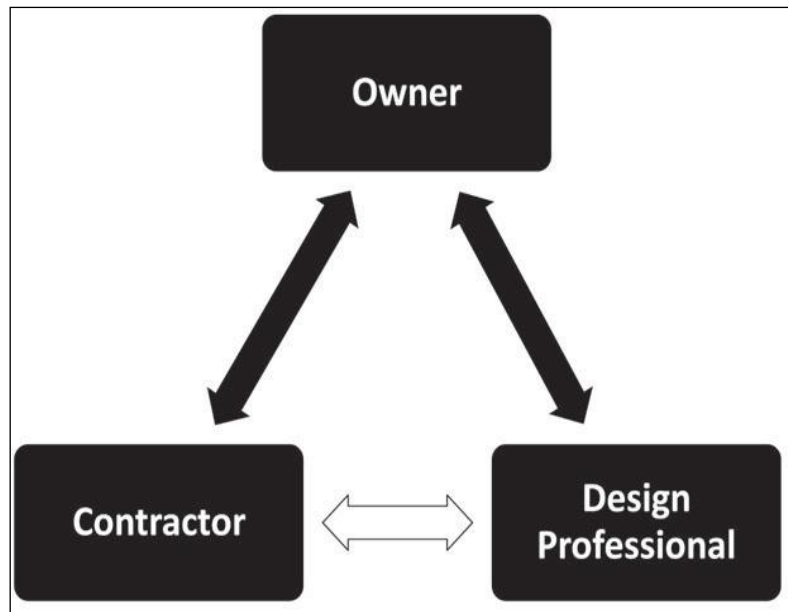


Figure 1-1: The owner, architect, and contractor triangle
 (Source: Winkler and Chiumento 2009, p.13)

The three different projects covered as part of this research were executed by ABC over a time interval of approximately three years. It is essential to examine briefly the nature of these projects and the type of agreement signed in each project. The type of agreement or contract plays an essential role in both claims formulation and management. Table 1-1 has been compiled to help understand a summary of the three projects this dissertation will cover as part of the research analysis chapter:

Project	Description	Contract Type
Project A	Convention Centre	Traditional (Lump sum)
Project B	16 storey hotel	Traditional (Lump sum)
Project C	20 Km Highway	Re-measurable Contract (unit rate contract)

Table 1-1 ABC Projects and Contract Types

1.5 Research Questions

Certain research questions have been raised from the main conceptual framework and literature related to claims management and substantiation, in addition to the review of the case studies. These questions are as follows:

- 1- What are claims and why do they need to be managed by contractors in the construction industry?
- 2- What are the shortcomings of the current claims management practices?
- 3- What can be noted as critical success factors which can contribute to the betterment of claims management, substantiation and presentation?
- 4- What are the elements of well-structured claims management?

By addressing the above mentioned research questions, the framework of this research can be structured to ensure an effective approach to the implementation of claims management in construction projects, and the successful accomplishment of the aim of this study. The questions will be further investigated in chapter 5 which includes the analysis of the case study.

The research questions have been formulated before the conduction of the field work. However the qualitative nature of the study allows for iteration and recursion (Yin, 2011) .In other words the researcher may progress in his research and revisit previous work to make modifications to aspects such as the research questions.

1.6 Research Structure

This research work has been structured into six main chapters. The first chapter includes a background of the UAE construction industry and how construction claims appear and are submitted by contractors. It also includes a review of the main aim and objectives of this research and the statement of the problem.

Chapter two of this dissertation is the literature review chapter. In this chapter, various opinions written by scholars in the field of contractual construction claims are reviewed. Various types of claims are also investigated from the points of view of different writers based on the definition of claims and views of construction law with respect to claims in the UAE.

Chapter three is the conceptual framework chapter which includes the theoretical flow of this work. In this chapter certain critical success factors and critical failure factors will be identified. The same will be used in later chapters through comparison of the research findings, literature review and their alignment with the conceptual framework of this dissertation.

Chapter four includes the methodology used to fulfil the research requirements and the approach used. The nature of this study will be qualitative, since it will include interviews with both claims managers and project managers.

Chapter five includes the analysis of the data amassed by the means of interviews and case studies. Three real life projects recently executed by a leading construction company will form the core of the analysis. The interviews will be conducted with construction professionals working for considerable years in the industry.

Chapter six is the last chapter of this dissertation and comprises of the conclusions, recommendations and limitations of the study. In this chapter, further and future suggestions and insights are also given to scholars who intend to complement the findings of this study in further refined or detailed forms. It will also summarize the findings which were envisaged after the analysis of the data retrieved through the interviews conducted with project managers and claims experts.

CHAPTER TWO – LITERATURE REVIEW

2.1 Introduction

One of the first stages of almost all research types is to explore literature and theories which are relevant to that particular research area (Fellows and Liu, 2008). The literature review chapter presents an extensive study of claims and the types of claims identified by various scholars in an attempt to seek what previous scholars have found and theorized. Moreover, a look into concepts related to construction claims such as contracts, construction law and managerial approaches to claims is important and cannot be overlooked while describing construction claims.

In this chapter, claims are initially defined. After understanding the concept of claims, further literature describing the types of claims is presented. With this understanding of claims, more insight is given into the process of claims management and substantiation by reviewing the various essential tools and factors as identified by claim specialists, which have contributed to the enhancement of claims management in the current practices in construction projects.

2.2 Definition of Claims

Many scholars have written profoundly on the topic of claims in construction. Among these scholars is Scott (1991) who defined claims as “the assertion of a right”. Other researchers such as Monsey (1993) have stated that construction claims are “change orders which have not been accepted by the various parties of the contract”. However, the most technical definition of claims is the one presented as the assertion of an alleged right by a claimant, commonly by the contractor requesting additional time and/or payment as direct result or circumstance implied in the terms and conditions of the contract (Chappell, 2011). It can be inferred from the former definitions that claims, with respect to Contractors, involve a request for extension of time or additional monies on account of obstructions engendered during the execution

of the scope of works covered under the contract and which may not be considered as a breach or failure on behalf of the Contractor.

It is clearly evident that, despite the new innovations in administering construction contracts, the circumstances that cause claims on most contracts will continue to appear (Harris and Scott, 2001). Similarly, in the United Arab Emirates, construction projects are frequently faced by delays and obstacles which tend to be very similar to the ones perceived in global construction projects. These delays usually result in unsought results such as claims, disruption and disputes which tend to be time exhausting and of considerable costs which may be solved only through litigation (Chen, 2008). With the frequent occurrence of claims, it becomes prudent to study claims management and substantiation as a daily practice in the life cycle of projects.

Among the other reasons which make claims of great significance and appreciation in construction projects are the ones identified by Lihong (2011) who clearly suggests three main aspects of construction claims. These aspects are:

- 1- The construction claim is an efficient path for the contractor to reduce the risk loss in engineering project's implementation process.
- 2- The project claim is an important means for the contractor to maintain its contract rights and interests.
- 3- The project claim reflects contractor's managerial and administrative expertise is a main driver for claims from a contractor's perspective which is to make profit.

2.3 Types of Claims

Claims tendered by contractors versus employers usually fall under four different categories which are contractual claims, common-law claims, quantum merit claims and ex-gratia claims (Chappell, 2011). The most common claims that tend to emerge in the construction industry in the UAE are contractual claims which take

place for various reasons (Zaneldin, 2006). Such claims are based on a clause or clauses in the contract which specifically allow the contractor to put in a claim in certain decreed circumstances (Chappell, 2011).

In construction projects, the tendency for the occurrence of claims in construction projects is high, given the fact that most projects are shifted towards the fast track approach (Faridi and El-Sayegh, 2006). Thus, contractual claims can be further divided to include extension of time (EOT), prolongation and acceleration claims. These three types of contractual claims are the most common in occurrence in the United Arab Emirates and will be the core of this research. With the review of each type of claim, a clear vision can be then established on claims management and substantiation of each type.

2.3.1 Extension of Time (EOT) Claims

The extension of time claims occurs in projects where time risk is passed on to the contractor executing the project. Intrinsicly, delays beyond the speculated time of completion in the contract may result in the contractor having to bear liquidated damages (LD) as a penalty of the delay. However, if these delays are caused by the client, it is important for the contractor to assure he claims for adequate additional time beyond the date of the contract expiry (Williams, 2003). Moreover, extension of time claims help reduce or mitigate liquidated damages and establishment of the contractor's right to additional cost for the period granted post contract expiry (Yogeswaran et al., 1998)

Where so ever liquidated damages are concerned, it is important to note that if the extension of time granted by the Employer covers the entirety of the delay period, then the contractor is no more liable for this delay. On the other hand, if the extension of time granted by the Engineer and Employer compensates a period less than the less than the full period of the delay or reasonable time required for completion, then the period difference remains the liability of the contractor (Ribeiro, 1996). In other words, it is imperative for the contractor to demonstrate his entitlement by the proper

methods of substantiation for additional time in order to *rightfully* transfer all liabilities to the Employer or other parties responsible for the occurrence of delays.

Every EOT claim formulated in any construction project goes through its unique lifecycle and passes through various stages which are identified by (Keane & Caletka 2008, p.9) as shown in figure 2-1 below, which is a diagram compiled by the researcher to summarize the authors' points :

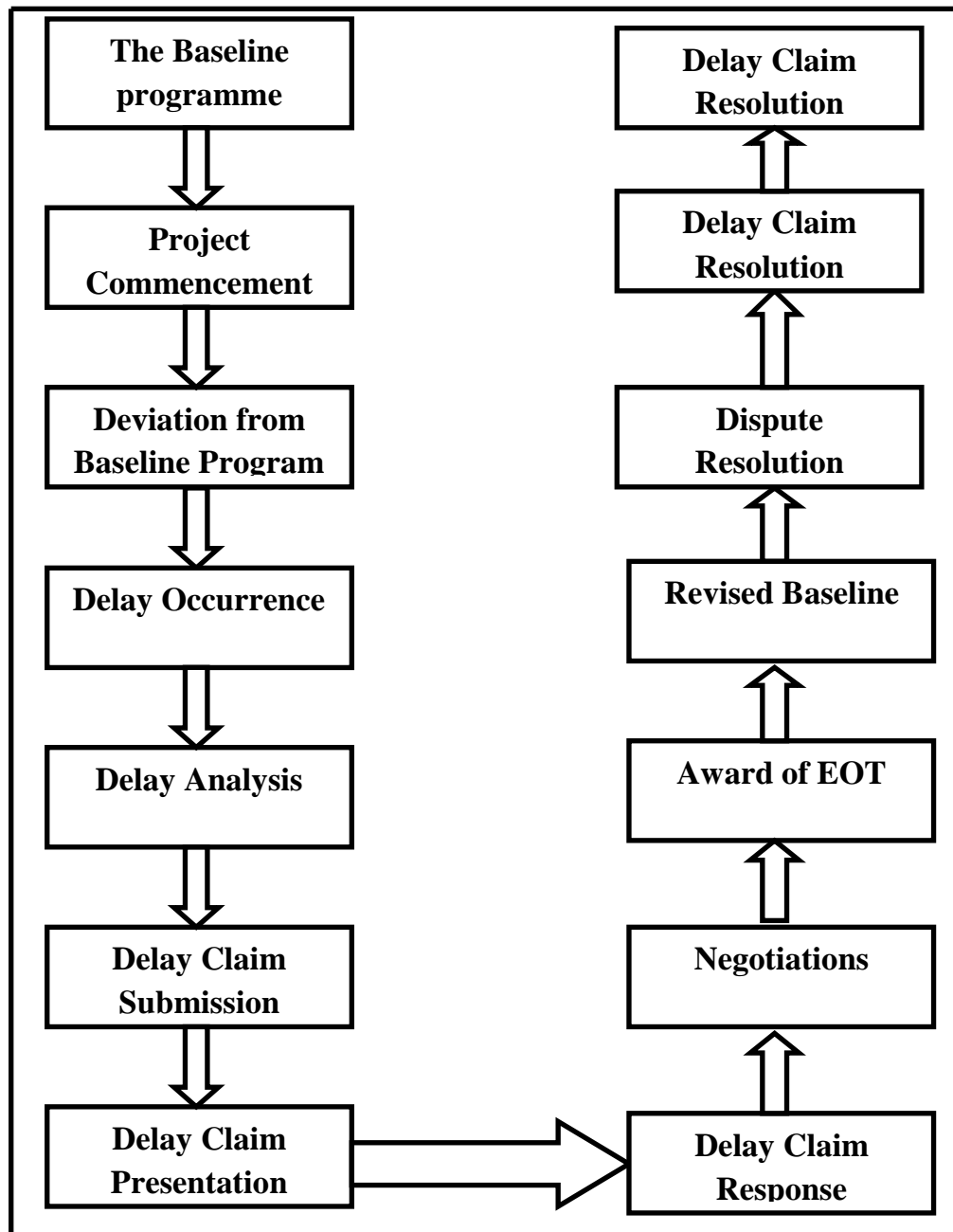


Figure 2-1: EOT Claims Formulation

Amidst the critical stages of an EOT claim life cycle is the claim submission (see (figure 2-1). When the Contractor has to submit his EOT claim to the Employer and Engineer, certain factors have to be taken into contemplation. Gibson (2008, p.155) amalgamates these factors in five main points which are crucial to any EOT claim. These are:

- 1- The status of the material if extension of time arises.
- 2- The source of causation or event which calls for EOT.
- 3- The relevancy and of the cause of claim in the contract documents.
- 4- The potential effect of the delay on the overall work progress.
- 5- Likelihood of the event having impact on the specified date of completion of various dates of completion if the contract implies more than delivery date.

Once the claim is ready and submitted by the Contractor, the next step will be to present the claim inclusive of certain elements. These elements or claim structures are stipulated by (Thomas, 2001) as follows:

- Detailed description of the cause of delay and any supporting contractual provisions in the contract which are being relied upon for the request for EOT
- Dates of when the delay occurred and the total time interval of delay
- The date of the formal notification of delay to the Engineer/ Employer and the supporting document of notification.
- Appendices to the EOT claim which include all the backup documents and records.
- A cause and effect study of the delays.
- Diagrammatic exemplification demonstrating the position of the baseline program, with respect to the new dates of completion taking into consideration the arising delays.
- Delay analysis showing the effects of the delay on the critical path and effects on the float per activity and total float.
- A formal statement requesting an EOT with full substantiation and supporting documents.

The process of estimating time in EOT claims is considered a cumbersome process for a Contractor. This is due to the fact that many complex factors are usually involved in the preparation of EOT claims. According to Palaneeswaran and Kumaraswamy (2008), the flowchart represented in figure 2-2 is used by contractors to establish time in EOT claims:

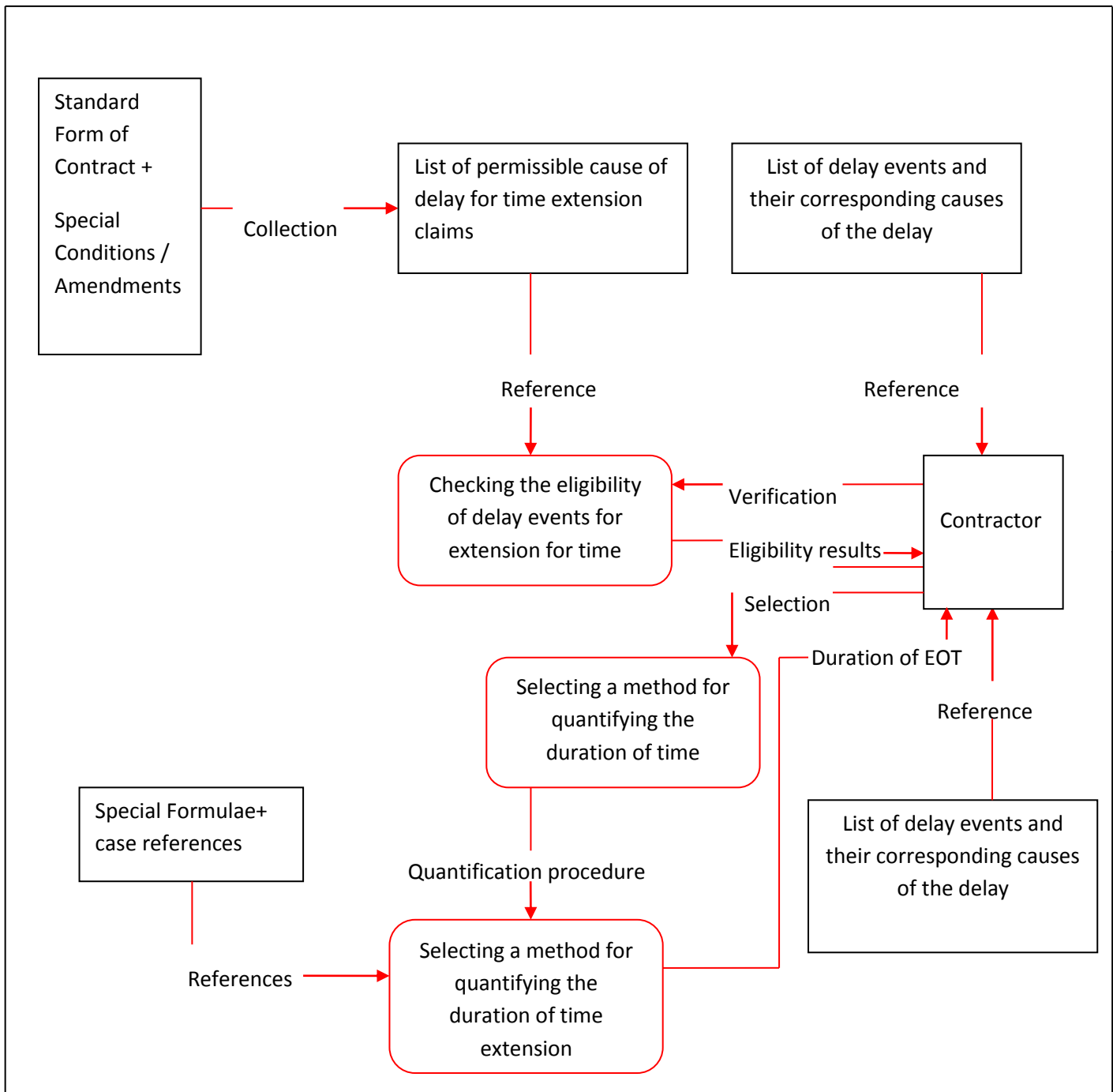


Figure 2-2: A basic data flow diagram for contractor side estimation of time extension claims**(Source: Palaneeswaran and Kumaraswamy 2008, p.428)**

It can be seen from the flowchart in figure 2-2 above that time can only be estimated for EOT claims once the causes of delay for time extension are deemed permissible by checking the justification of these delays. From then onwards, the Contractor can engage in assessing the time quantum.

Nevertheless, the Palaneeswaran and Kumaraswamy model tends to neglect the cost factor associated with the time. Claims quantum is depicted by (Monsey, 1993) as being quantum of time and cost. Accordingly, the emphasis has to be made on the need to compute the amount of impacts by showing the quantum of cost and additional time, resulting from identified delays (Williams, 2003).

Finally and upon the submission and receipt of the claim from the Contractor, the Engineer has to reply to the Contractor's claim expressing content or discontent within a period of 42 days after receiving the claim or the particulars it is supported by (Ndekugri et al., 2007). Hereabout, the roles of the Engineer and the Employer come into place, as shall be seen in the coming sections, in which FIDIC identifies the onus put on the Engineer in his duties to assess Contractor's claims.

2.3.2 Prolongation Claims

Followed by the justification of the claim, the succeeding challenge is to propose the quantum of the claim, by including both the direct costs and delays resulting of the unpredictable circumstances and their accumulative effects (Ren et al., 2001). In other words, the concept of EOT and prolongation cost are strongly linked with each other. After the EOT claim takes place and is approved through the Engineer expressing his consent and granting the Contractor additional time for completing the project, prolongation claims develop. Therefore, prolongation claims are usually formulated towards the end of the project and that is constantly the period when prolongation claims are formulated by the Contractor (Ingram, 2004).

In prolongation claims, Contractors have the privilege to request recovery of additional off site overheads in the event where the works at site had been expanded due to excusable delays which allow for additional cost entitlements (Ingram, 2004). However, the payment is not limited to the overheads as described by Ingram, but it is also extended beyond to include many other costs borne by the contractor during the extended period of time acknowledged by all parties. One of the most important formulas used by Prolongation claims managers in estimating offsite over heads is the one identified by (Thomas, 2001) as *Hudson's Formula*. This formula represented below is very commonly used by many of the claims specialists:

Head office overheads (profit) % /100 X Contract sum / Contract Period X (Period of delay)

The other costs referred to herein include all the costs which the Contractor incurred during the period of prolongation beyond the expiry of the original contract period endorsed by the two parties. The costs of prolongation may vary from project to project and depend on the circumstances imposed on a particular project or situation. Some of these costs may include cost of direct and indirect staff, labour, tools and plant and site expenses.

2.3.3 Acceleration Claims

Acceleration measures come around in projects where high risk, time contingency loss, disruption and exposure to more delays exist (Sun and Meng, 2009). Acceleration by definition means the process of taking measures to compensate for time loss by attempting to complete the scope by specified durations or as a remedial recovery of delays (Gibson, 2008). Such measures usually have a tendency to increase the overall cost of the project. On the other hand, acceleration can be defined as the process of increasing the speed and thus, in the context of construction contracts, an early closeout (Chappell, 2011). However, the question raised in the case of acceleration is “finishing before what?” The completion can be either before the contract end date or before the excusable delay duration exceeding the contract time limit.

Keane and Caletka (2008, p.99) categorize acceleration to be either *instructed* or *constructive*. On the other hand, Greenstreet et al. (2005) state that instructed acceleration refers to the actual acceleration at the contractor’s discretion and may provide the basis for increased costs. Constructive acceleration as understood by (Greenstreet et al. 2005) takes place in the situation where the contractor has experienced delay, but has not yet been granted an extension of time.

Acceleration tends to take place in the event of certain situations. Scholars like Chappell (2011, p.41) point out these circumstances as follows:

- 1- Through mutual understanding and consent among the contract parties, conditionally if such measures are called for in the contract upon the decisive directive of the Engineer.
- 2- Based on unilateral good intentions by the Contractor in an attempt to mitigate the delay.
- 3- By substantial proof by the Contractor that acceleration is the only choice opted for considering the situation.

On the other hand, Rider and Long (2009) attribute the occurrence of acceleration or *pacing* to numerous factors which are summarized by them as being

either late change orders, nominated contractors or late approvals on submittals and untimely changes. It is important to understand the situations in which acceleration usually takes place by agreement. This is attributed to the fact that non-agreement on acceleration might jeopardize the Contractor's acceleration claim. These situations have been illustrated by Chappell (2011, p.43) as:

- 1- Where it is improbable that the works can be concluded by the contract expiry period, due to delays making the Contractor eligible for EOT.
- 2- In the event works cannot be completed due to delays the contractor is accountable for.
- 3- Due to concurrency of delay, caused by both the Employer and Contractors delays simultaneously.
- 4- A decision made by the Employer that he requires the project concluded and handed over before the contract duration.

Regardless of the reasons which cause acceleration to occur, projects costs will be increased. These are usually presented by the Contractor to the Employer in the form of a claim. Once the acceleration measures are justified as being constructive and fall as part of the mitigating time factor, the Contractor will be eligible to claim his costs for the measures he has taken. These costs to which the Contractor is usually entitled are classified by Haidar (2011, p.114) as five different costs, which are:

- 1- Cost for extra manpower and plant due to the loss of productivity resulting from exaggerated thrust of resources and machinery.
- 2- Cost of extra logistics needed or additional working hours (i.e. airfreight)
- 3- Cost of expanding site services and facilities.
- 4- Other costs seen necessary to expedite works.
- 5- Staff and engineering overtime and incentives.

2.4 Causes and effects of Claims in construction

Claims in construction projects tend to have a set of causes for their occurrence and effects. The contractor needs to identify these causes carefully so as to substantiate his claim in the right way. The causes of claims in construction projects are usually known and pre-identified. If these causes are not evoked by the contractor, then they do not fall under his liability. Longbottom and Rawling (2008) summarize the causes of claims into a few which can be either excusable, compensable or both. Figure 2-3 clearly shows the type of event resulting in a claim:

<u>Event / Cause</u>	<u>Excusable</u> <u>(Clause 23)</u>	<u>Compensable</u> <u>(Clauses 11/24)</u>
'Act of God' (e.g. earthquake)	✓	
Inclement weather	✓	
Discrepancies in information	✓	✓
Variations	✓	✓
Postponement of project	✓	✓
Late information	✓	✓
Inspections / tests	✓	✓
Antiquities	✓	
Employer's direct contractors	✓	✓

Figure 2-3: Causes of Claims

(Source: Longbottom and Rawling 2008, p.3)

Longbottom and Rawling's table tends to include some of the causes of claims in construction projects. However, these are a few sources from which claims can arise and will be profoundly reviewed in further sections of this chapter.

A direct outcome of claims as mentioned earlier would be completion schedule delay, assuming the Contractor is able to establish his entitlements to additional time

post contract expiry (Hwang and Low, 2011). If the claim is managed appropriately, the contractor can further ensure the award of cost compensation.

The strong link between claims and time delays can also result in cost escalation. In other words, the increase in the amount of money required to construct the project far beyond the initial allocated budget (Kaliba et al., 2009).

Both time and cost claims in fact can lead in most situations to unsought consequences. On the level of relationships between the contract parties, they can have a very undesirable effect. This is attributed to the fact that in most occasions, claims have a relevantly high tendency to cause disputes, conflicts and alienation between the various key stakeholders or contract parties. Consequently, disputes in most situations result in expensive and remorse proceedings like arbitration and litigation (Cheung and Yeung, 1998).

In summary of the above, claims in construction projects are direct causes of schedule overrun. With the schedule overrun, cost escalation can consequently appear leading to disputes and conflict between the various contract parties. These consequences come as a result of certain events and causes identified by various scholars in the field of claims and project management.

In light of such complexity of time and cost factors resulting of claims, the contractors need to consider the implementation of claims management as a well-structured discipline along with other project management relevant areas of knowledge.

2.5 Claims Management

The importance of claims management does not only exist in the fact that this field of management is part of project management, but because it is an integral component of the contractor's business strategy (Lihong, 2011). Another aspect of importance in this managerial field is the risk contained within construction projects which has become the focus of attention since risk is strongly linked to the cost and time overruns (Kartam and Kartam, 2001). Hence, the uncertainty found in construction projects is greatly linked to time and cost overrun and subsequently is related to claims which need to be conservatively managed by the contractor to ensure his rights.

With the existence of high risk in construction projects, claims are considered as an efficient path for the contractor to reduce the risk loss in the engineering project's implementation process; various risks concealed in engineering project's implementation process, like economic risks, contract risk, natural condition risk as well as construction's risk (Lihong, 2011).

The concept of claims management can be defined as the process of deputing and managing resources to advance a claim from identification and analysis through preparation, and presentation, to negotiation and settlement (Keane, 1994; Ren et al., 2001). Hence, it is prudent for the Contractor to establish a well-structured claims management whether in house or through appointing a third party specialist to work as part of his team. This team can then identify claims and prepare them in an initial step before the final negotiation and settlement.

The claim management process like any other system undergoes a life cycle. This life cycle has been identified by (Levin 1998; Ren et al., 2001) to follow a standardized form which is illustrated in Figure 2-4 to contain 7 processes leading to claims management and they are the recognition, notification, accurate documentation, time and cost, pricing, negotiation and dispute resolution:

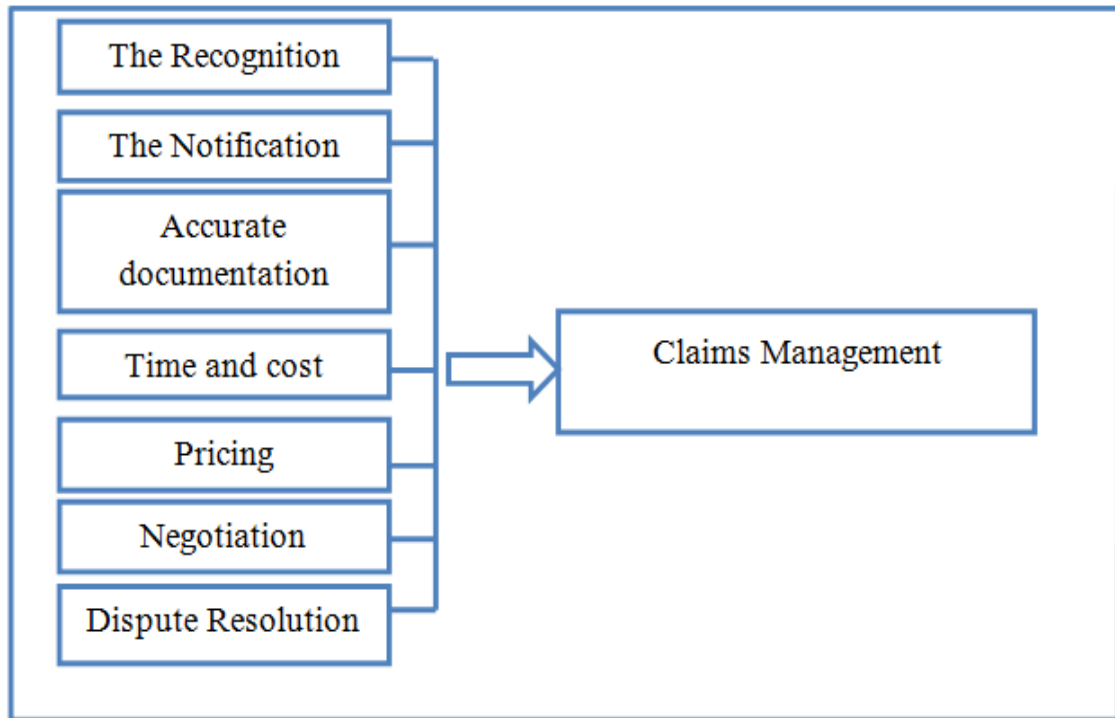


Figure 2-4: Claims Management Lifecycle

On the day to day claims management process, certain tasks need to be considered by the Contractor's claim management team involved. These have been identified by (Apte and Cavaliere, 1992) as three main tasks which are necessary for the Claim Handling Process (CHP):

- The initial challenge is to decide on the quality and quantum of resources actually needed for the handling claims.
- Exercising monitoring and control over the handling process of claims by ensuring the implementation of remedial acts if and when found necessary.
- The last task is to specify CHP procedures, which includes training and means of research and development in the field.

In the management of claims, the concept of concurrent delays is another very vital aspect of construction projects which contractors try to avoid. A concurrent delay is the event in which a minimum of two delays take place simultaneously, either of which, had it occurred alone would have affected the entire completion schedule (Arditi and Pattanakitchamroon, 2005).

In the event that concurrency cannot be avoided, the owner is not required to pay the contractor extended project costs if the contractor is responsible for independent concurrent delay (Rider and Long, 2009). Figure 2-5 retrieved from (Itani, 2009) demonstrates concurrent delays with respect to types of delays which clearly indicate that in the event of two delays, one by the Employer and the other by the Contractor, concurrency of delays will occur.

To defend their position against any accusations of concurrency, Contractors usually refer to “padding delay”. This is supported by the realization of the existence or potential existence of employer delay on the longest critical path. The Contractors may decide to slow down their work on non-critical activities in order to keep pace with employer delay (Zack et al. 2000; Itani, 2009).

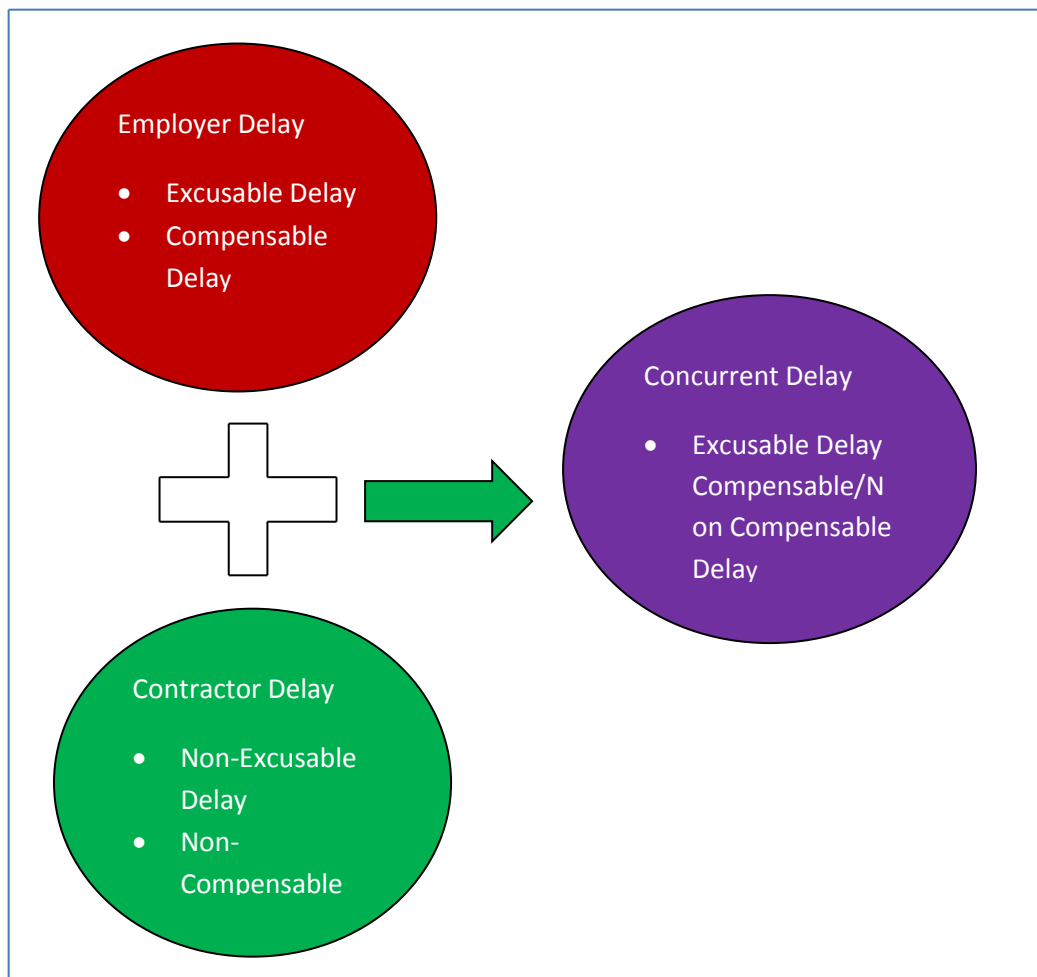


Figure 2-5: Types of Delays and Concurrency
(Source: Itani 2008, p.26)

Another indispensable dimension of a proper claims management system is good planning. Winch and Kelsey (2005) imply that project planners have basic and fundamental duties which are common in almost all construction projects. These duties as stipulated as being the recognition of the full site construction work programme, the entire procurement logs, necessary dates which affect procurement of material such as design data, the drawings preparation and submission by the contractor and finally the duty of approving these drawings and submittals in timely manners by the Engineer (Winch and Kelsey, 2005).

Strategy is another vital dimension in respect to claims management. In a simplified construct, strategy is looked on as a consolidative approach which can link the intended purpose with the course of action (White, 2005). In consolidated claims management, the idea of developing a claim is strongly linked to procedures and mechanisms of claims development and substantiation. Kerzner (2001) assumes that one of the earliest stages of strategy is to implementing a strategic planning process by the apprehension of the general surrounding environment where the strategy will be executed. The environment in this case is each project aside. In other words, the strategy for claims management can be set project wise with the support of the top management to handle each claim depending on the environment in which it is situated.

Teams and team awareness are the last identified essences of claims management. This is ascribed to the fact that teams who hold extensive experience are needed to tackle complicated work which may require tools such as innovation, creativity, and an abundance of knowledge bring about positive effects (Loo, 2003). Features such as creativity and abundance of knowledge increase the teams' awareness towards proper reporting of claims drivers to the management. In conclusion effective team practices which ensure the team worked towards achieving its goals and was receptive to collaboration with other teams is therefore an advantage for the management of claims (Baiden and Price, 2011).

2.6 FIDIC Views on Claims

FIDIC was formed in the year 1923 by three national associations of consulting engineers in Europe (FIDIC, 1998). The establishment of FIDIC came as an attempt to maintain the rights of the parties involved in construction contracts by offering general clauses and conditions which can be applied to many forms of construction contracts.

The design of FIDIC was initiated by the Employer and his representative, the Engineer, and has been applied in many countries worldwide (FIDIC, 1999). One of the countries which apply FIDIC is the UAE which has adopted FIDIC 1987 as a standard form of contracts to formulate local contracts between the Employer and the Contractor.

FIDIC includes certain clauses related to claims which are rather generic and abrupt. However, these clauses have been strictly adhered to by Employers and Contractors in addition to the particulars of the contract. In the event the contractor is the claimant, FIDIC (1999) defines certain clauses which have to be strictly abided by. These clauses by reference and description are summarized in table 2-1:

	FIDIC Clauses related to Claims	Clause reference
1-	An extension of time for any such delay, if completion is or will be delayed.	Sub-Clause 8.4
2-	The Contractor shall give a further notice if he incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable	Sub-Clause 20.1
3-	“ <i>Variation</i> ” means any change to the Works, which is instructed or approved as a variation under	Clause 13
4-	Take over certificate	Clause 10
5-	“Cost” means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.	Definition 1.1.4.3

Table 2-1- FIDIC Clauses relevant to Claim

2.7 Delay Analysis Methods

A delay is the time overrun post a specified completion date in the contract or to a date different than one agreed among the parties for the completion of a project (Assaf and Al-Hejji, 2006). (Reams 1990; Williams, 2003) categorize delays on the basis of compensation and excusableness into three categories which are: excusable/compensable delays, excusable / non compensable delays and non-excusable/non compensable delays.

The valid form of delay which is beneficial to the contractor's claim is the first type where the delay occurred due the Employer's fault and therefore, as the contractor is not found culpable, but on the contrary he is eligible for an extension of time. In the event of such delays, the contractor is obliged to submit a notice of his intention to claim, which is has to be later followed by particulars of considerable detail on the claim as an attempt to formalize the delay occurrence (Kumaraswamy and Yogeswaran, 2001).

In a study which covered a wide sample of consultants, contractors and owners, Assaf and Al-Hejji (2006) found that delays in construction projects can take place due to 9 main factors. These factors are categorized by (Assaf and Al-Hejji, 2006) and are represented in figure 2-6 for a better understanding.

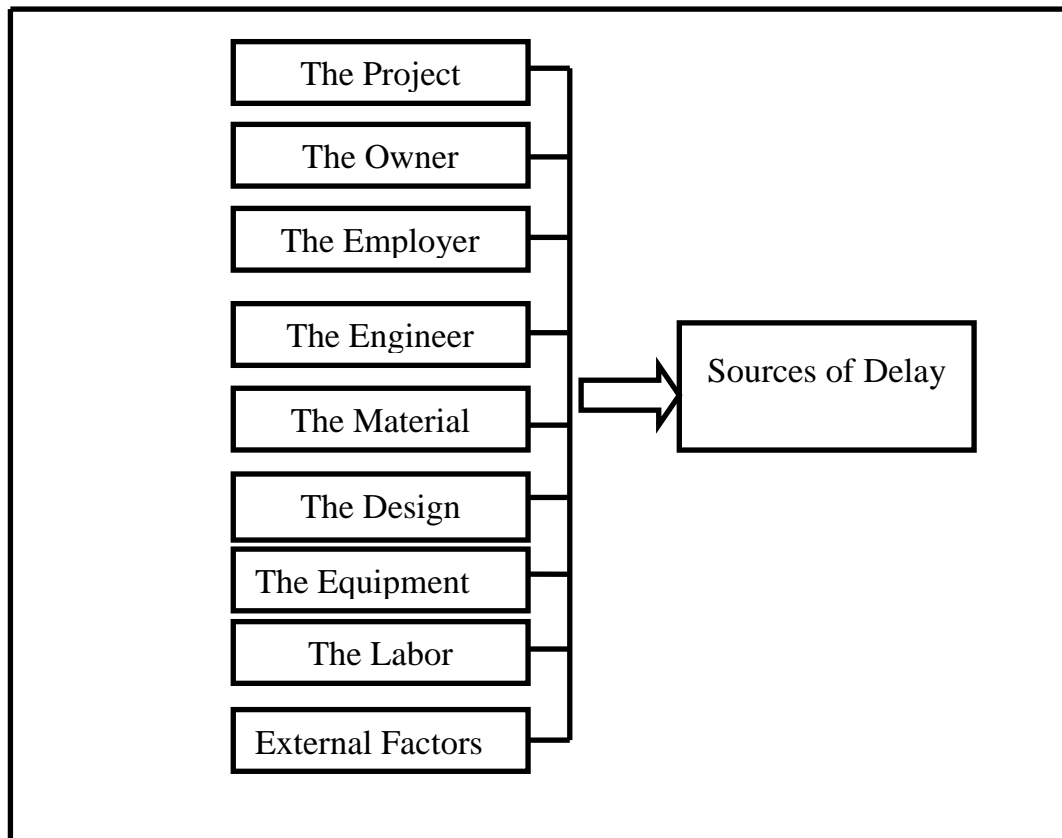


Figure 2-6: Causes of Delay

The issue of delay is accompanied by the concept of delay analysis and various techniques used to evaluate and measure delay. The delay analysis procedures will involve all the evidence and data which are recorded during the construction phases in the form of schedules, updates and other valuable documents (Yang and Kao, 2011).

The most popular and identified set of delay analysis techniques used by claims analysts are the ones described by (Braithwaite and Ndekugri, 2007) as the as-planned versus the as-built technique, impacted versus the as-planned technique, collapsed as-built technique, window analysis technique, and time impact analysis. According to Arditi and Pattanakitchamroon (2005), the first method of as-planned versus the as-built depends on the identification of the difference between the as-planned schedule and the as built schedule of the project. The second delay analysis method is the

Impacted As-Planned which involves integrating perceived delays as normal activities into As-Planned CPM schedule to establish how project completion date has deviated as a result of those delays (Brammah and Ndekugri, 2007).

The Window Analysis attempts at determining the state of the project immediately prior to the occurrence of delays, such as the monthly update of the CPM by identifying delay within a window of time (Fredlund et al., 2003). On the other hand, the time impact analysis technique determination of the project delay caused by each of the delaying event using critical path method is dominant along with other dimensions (Mohan and Al-Gahtani, 2004).

The delay analysis procedures have been described by (Kao and Yang, 2009) as going across phases. In each phase questions about the activities and purpose are raised to reach to the end result of delay analysis. These have been illustrated in figure 2-7 showing the different procedures and processes:

Phase	Activity	Purpose
Phase 1	Asking "what was supposed to happen?"	Determining the baseline schedule
Phase 2	Asking "what did happen?"	Building the currently schedule
Phase 3	Asking "what were the differences?"	Executing delay analysis
Phase 4	Asking "how did they affect the project schedule?"	Allocating the responsibilities of delays

Figure 2-7: Delay Analysis Procedures
(Source: Kao and Yang 2009, p.410)

2.8 Change and Change orders

Change is considered as inevitable on almost all construction projects due to the uniqueness of each project and the limited quantum of resources available for completing the project (Hanna et al., 2004). Barnard (2005) defines change in construction projects as “the situation where the contractor is directed by the Employer to carry out works not part of the original work brief and plans realized by the contract. The ineluctability of changes is assigned by (Yitmen et al., 2006) to the fast-track construction nature, where construction commences prior to the completion of design, and the scope of work keeps changing throughout the project’s different phases.

The occurrence of change in construction projects is attributed to the rigid scheduling or the mere existence of fast tracking as an only choice to execute projects (Gunduz and Hanna, 2003). On the other hand, Motawa (2003) specifies the reasons behind change as being lack of information at the initial stages of projects of the project variables which lead to insufficient knowledge of future circumstances and impreciseness arising from equivocalness in the project criteria. Irrespective of the change driver or type, the deficiency of perceptiveness of the impact of such changes on project operations has been a quality of most stakeholders in construction projects (Moselhi et al., 2005).

The appearance of changes has been strongly linked to claims by Han et al. (2011) who believe that design and construction of projects are greatly affected by design changes which are a main contributor to schedule delays and cost overruns in projects. Changes in construction projects are usually followed by change orders or formal directed change, as presented by (Molly, 2007). These are instructions from the Employer or Engineer to the Contractor to implement these changes.

A direct result of change is usually additional cost. Wherever the cost of change is involved, the contractor is entitled to recover costs associated with change orders in the form of a claim in certain cases. These cases are highlighted by Jergeas et al.

(1994) as being the cases of direct labour cost, direct material cost, overheads and profit and tools and plant.

In a unique study attempting to rank causes of claims in the UAE, (Zaneldin, 2006) found that change has the highest frequency as a direct cause of claims. His findings were based on projects constructed in the UAE from the period 2000-2004 and they are summarized in Table 2-2. It is clearly understood from the table below to what extent changes are significant and potentially related to claims occurrence:

Causes of Claims	Importance Index (%)	Rank
Change or Variation Orders	55.00	1
Delay caused by Owner	52.50	2
Oral Change orders by owner	51.40	3
Delay in payment by owner	48.90	4
Low price of contract due to high competition	48.60	5
Changes in material and labor costs	46.10	6
Owner personality	45.10	7
Variations in quantities	44.70	8
Subcontracting problems	44.00	9
Delay caused by contractor	43.70	10
Contractor is not well organized	43.70	10
Contractor financial problems	43.70	10
Bad quality of contractor's work	42.60	13
Government regulations	40.10	14
Estimating errors	39.10	15
Scheduling errors	39.10	15
Design errors or omissions	38.40	17
Execution errors	37.70	18
Bad communication between parties	37.70	18
Subsurface problems	37.00	20
Specifications and drawings inconsistencies	35.60	21
Termination of work	35.60	21
Poorly written contracts	33.80	23
Suspension of Work	33.80	23
Accidents	33.10	25
Planning errors	32.70	26

Table 2-2: Ranking the cause of claims and the frequency
(Source: Zaneldin, 2006, p.455)

A direct consequence of changes as described by Alnuaimi et al. (2010) is that changes will mostly result in revision of plans, addition of works, more time for decision making, material re-sourcing, etc. Re-work and consequently a *delay* come with the addition of work. Meng (2009) concludes that changes in construction projects can lead to time and cost, and risk related effects, all of which can cause delays.

With the occurrence of changes and change orders, the direct impacts of change orders surface and have been identified as having an undesirable impact on construction productivity, resulting in a drop in the labour efficiency (Moselhi et al., 2005). The justification of change orders as described by Yitmen et al. (2006) exist for the basic aim of providing tolerance in a manner that satisfies the construction demands of owners throughout a project and serving in eliminating errors found in the design, contract documents and methods used in construction. The entirety of these impacts can either be overcome by extending the duration of the contract through granting the contractor an EOT or through acceleration measures to eliminate the time factor at the account of cost or by allowing for both as has been demonstrated in earlier sections of this chapter.

From an Employer's perspective, implementation of change management systems in construction projects can help in minimizing cost, time overruns and improving quality dimensions (Hwang and Low, 2011). Nevertheless, Employers awareness does not seem to exist in understanding that factors such re-design and change can massively reduce project well-being by attracting re-work, requiring additional time and resource costs (Han et al., 2011).

On the other hand, and from a Contractor's perspective, the importance of change management is derived from the fact that change management is inherent in project management and is considered as one of the best ways to deal with changes (Zhao et al., 2011). Management of change is also indispensable in accordance with the contract and compensates the contractor for changes authorized by the Employer and the Engineer when quantities increase as a result of change (Bunni, 2005).

2.9 Records and Documentation

The basis of any strong claim management system greatly depends on the presence of a well-structured documentation system. When the contractor's claim team meets up to prepare the project claim, the first step they take is to read the documentation available and the level of detail these documents bear (Baram, 1992). The documents may include and are not limited to the delivery notes, personal diaries, minutes of meetings, reports, progress photos at various stages, correspondence and a variety of other sources in the site (Scott, 1990).

Ingram (2004) emphasizes that it is of high importance that records are kept from the outset of a project, especially if the likelihood of claims occurrence exists. An overall maintenance of such records is likely to speed the financial and time related claims formulation and substantiation.

Moreover, Keane & Caletka (2008, p.68) assume that with the establishment of good record keeping grounds, the administrators of the contract are often able to access fundamental information swiftly enough to act upon the emergence of problems instantly. Consequently, this information is needed for the proper backup of claims for EOT and cost by the contractor, and simultaneously proper assessment by the Engineer (Scott, 1992).

Notice letters are other features of good claim documentation in which the contractor can estimate the time delay and cost by reporting the event to the Engineer and Employer upon occurrence (Dobbin, 2006). Conversely, verbal instructions by the Employer or Engineer are regarded as indicators of poor documentation and record keeping which are often neglected by the contractor's project manager. The scenario which usually takes place is that the instructions are carried out by the contractor during the execution stages without the proper documentation or official notification by the contract administrator. Such an act usually jeopardizes the contractors' entitlement for time and cost.

Keane and Caletka (2008, p.81) contend that “FIDIC contract forms all contain provisions for the contractor to confirm architects' or engineers' verbal instructions, and such instruction will be deemed to be architects' or engineers' instructions if not dissented from in writing within the period specified in the contract”. In lieu of verbal instructions, the right practice would be that scope changes should be initiated either by a change order, letter of intent, or field directive (Bu-Bshait and Manzanera, 1990).

Turner (1995), on the other hand, summarizes the aspects of record keeping in context to claims management as 5 major areas which need to be considered as part of a proper claim support documents. These are:

- 1- Accumulating comprehensive records of the relevant documents and data which may help in a retroactive analysis.
- 2- Daily, weekly and monthly issuance of progress reports inclusive of :
 - The work progress containing figures, facts and dates.
 - Descriptions of the conditions at site such as the weather circumstances.
 - Delays in deliveries, hold-ups due to Employer interference or breach.
 - Requests for information and the dates of reply by the Engineer.
 - Elaboration on the works accomplished.
- 3- Emails, phone conversations and verbal directives made by the Employer or his representative the Engineer.
- 4- Minutes of Meetings which should not be allowed to pass unanswered or uncommented since silence on a matter of dispute will result in moving the burden on to the contractor.
- 5- Photographs which include dates and time of the photos pose an essential source of substantiation, especially when these are taken at various stages of the project.

The common practice among contractors tends to neglect the essentiality of maintaining proper records. As such, improper record keeping can, in many instances, result in the loss of important project data or history of events which has occurred in the lifecycle of the project. This information may not be needed at that phase of the project, but will be required towards the end when claims are presented and require further substantiation.

Conversely, and in the terms of poor record keeping, Jergeas et al. (1994) assume certain factors to be sources of failure. These are identified by them as the failure to document delays and their impacts and proceeding with change orders without written consent by the concerned parties.

In summary, proper and improper records keeping can result in advantages and disadvantages respectively to the process of managing and substantiating claims. This comparison has been amalgamated from this perception and can be seen in figure 2-8:

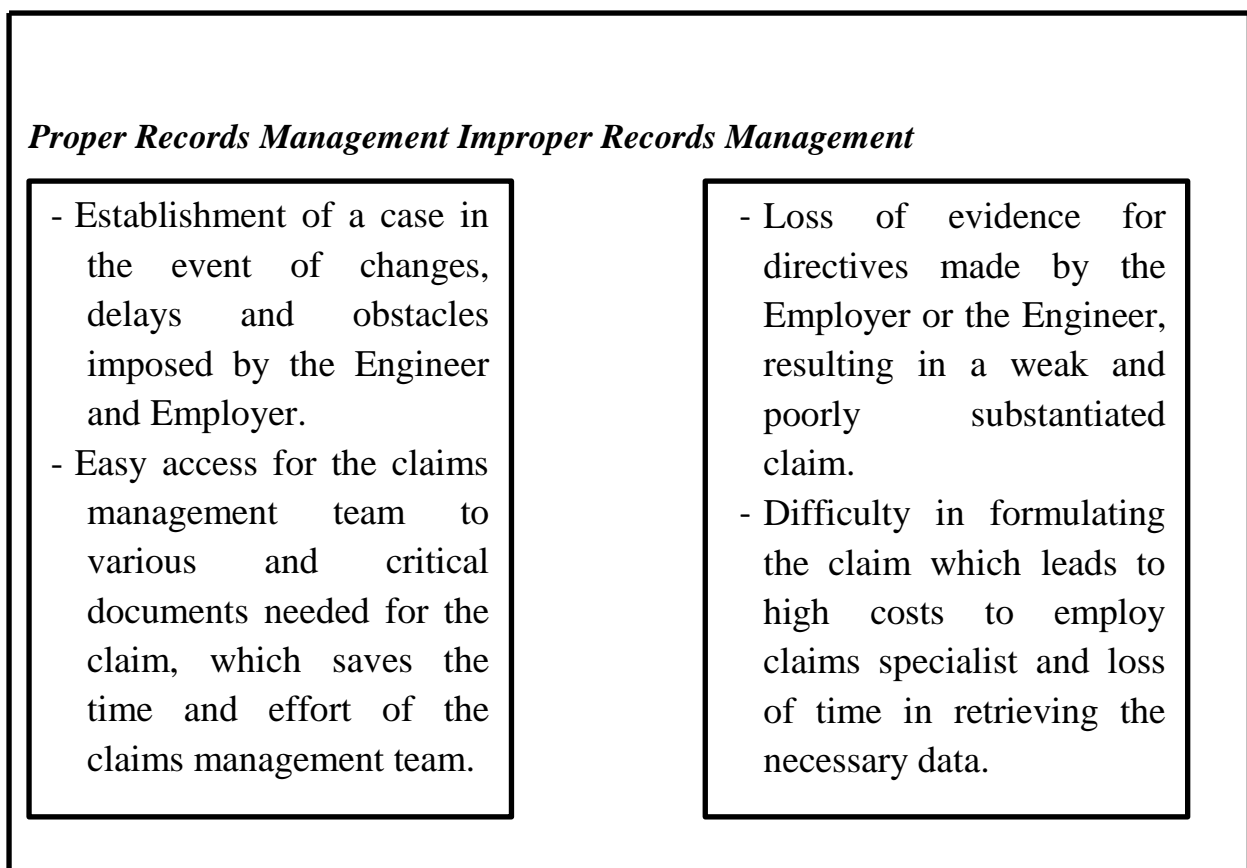


Figure 2-8: Proper and Improper Records Management

2.10 Contract Administration

Contract Administration falls under the broader concept of *Construction Administration* which involves all the day to day duties of which are monitoring the communications, business systems, procedures, responsibility, authority, duties of all of the parties, documentation requirements, construction operations, planning, scheduling, payment administration, change orders, extra work, dispute procedures, claim handling, negotiations and administrative closeout (Fisks and Reynolds ,2010).

For any construction contract to be professionally administered, the Engineer is considered as a key player. The duty of the contract administration is usually assigned by the Employer to the Engineer or the Architect. Both the Employer and Contractor look to the Architect to be an impartial interpreter of the contract documents and the meaning of the documents if unclear or found disputed (Winkler and Chiumento 2009, p.177).

Ndekugri et al. (2007) find that in addition to the duties assigned to the Engineer, he is considered as a neutral and independent party who as a professional is trained to maintain a balance between the Employer and Contractor. Hence, fairness is an essential characteristic which the Engineer should practice and have the freedom to express. Discretion is another relevant feature the Engineer should be allowed to exercise impartially when giving his decision, opinion and consent (Bunni, 2005). Otherwise, contractors who sense a lack of impartiality on the part of the architect may claim that the owner and the architect have entered into a conspiracy to maliciously defeat their honest attempt at getting paid (Winkler and Chiumento 2009).In conclusion, the contract administration role played by the Engineer is of great importance. Needless to say, the Engineer has constantly to remember that like other stakeholders, he operates under the standards of project management defined by PMI which is important to demonstrate commitment to ethical and professional conduct (PMI, 2008). Such commitment ensures aspects like integrity and fairness in the assessment of both the Employer and Contractor's rights under the provisions of the contract.

2.11 The Role of the Engineer in claims assessment and evaluation

In certain occasions of Contractors claims the Engineer may perform in restricted way articulated for him in the contract (Chappell, 2011). Moreover, most forms of contracts such as FIDIC call for a significant role for the Engineer to play in the assessment of claims and evaluation. The Engineer or a consultant designated by the owner is responsible for deciding the outcome of the contractor's claim (Asem et al., 2002). Once the claim is tendered by the contractor, the architect will become the advisor to the owner and impartial arbiter of the construction documents during this period (Winkler and Chiumento 2009).

In most situations, the determination of the Architect becomes influential and maybe taken into consideration by the claimant and Employer, if the claim is settled amicably. Otherwise, the process is then referred to other methods of dispute resolution which have been validated such as formal arbitration and litigation (Cheung, 1999). Itani (2009) summarizes the role of the Engineer under the Red book of FIDIC as far as claims procedures are involved in figure 2-9. The figure is self-explanatory on the proceedings of claims submission under FIDIC contract forms:

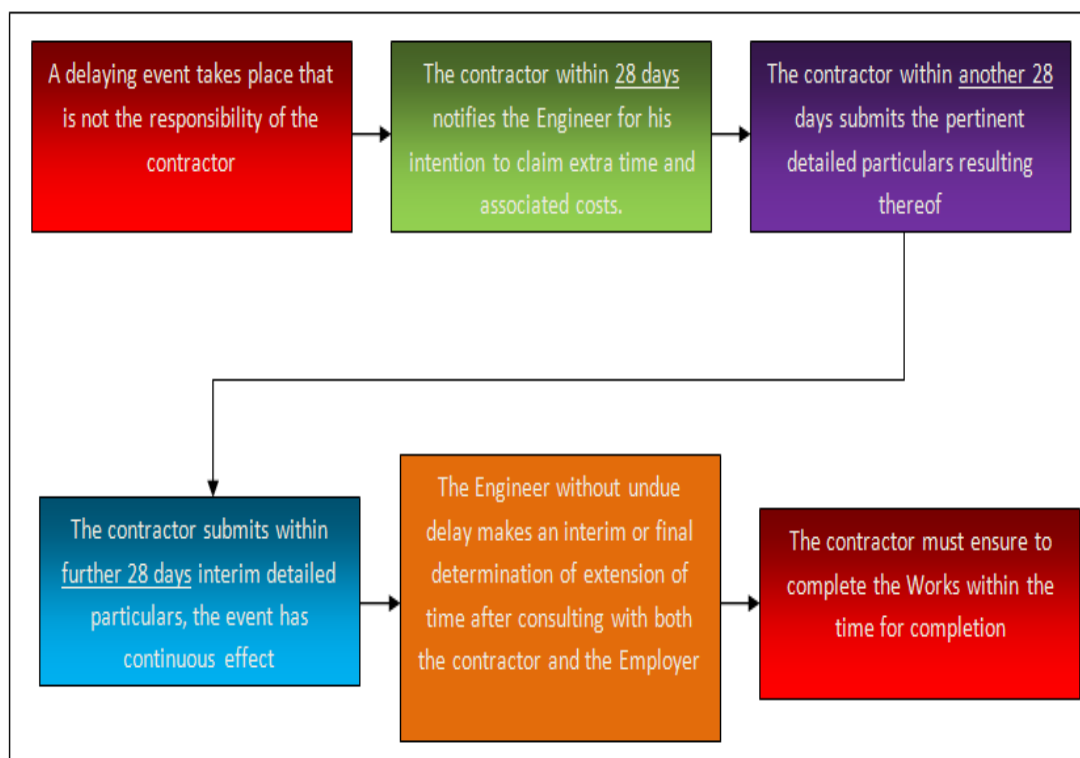


Figure 2-9: General Sequence of Claims Procedure under the Red Book

(Source: Itani, 2009, p.25)

In modified versions of FIDIC, the Engineer is not authorized to practice the right to agree or determine the extension of time or additional cost to which the contractor is entitled to in event of excusable delays (Ndekugri et al., 2007). Thus, the Engineer is no longer the determinate party and the direct contract parties have to exercise other forms of dispute resolution techniques identified and known as Alternative Dispute Resolution techniques (ADR).

ADR may start with direct negotiation, conciliation and mediation or winding up in arbitration to litigation (Cheung, 1999). These are illustrated in figure 2-10 by (Groton 1992 ; Cheung, 1999) in the forms of steps, whereas each step is associated with a degree of hostility. It can be actualized from that costs tend to escalate with the failure of one step of resolving a dispute and ascend to the next step of resolution:

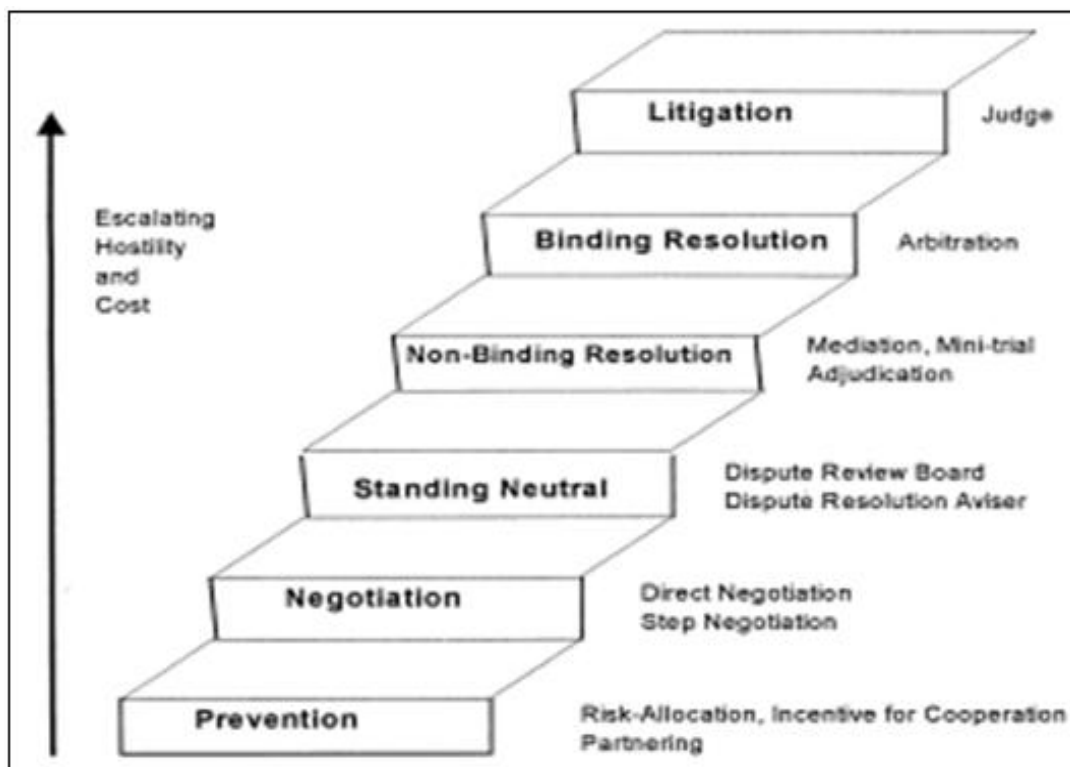


Figure 2-10: Construction Dispute Resolution Steps

(Source: Groton 1992; Cheung 1999, p.190)

CHAPTER THREE –THE CONCEPTUAL FRAMEWORK

3.1 Introduction

The main purpose of the conceptual framework chapter is to align the aim of this dissertation with the literature related to claims management and substantiation. In other words, the exploratory and descriptive nature of this work makes it obligatory to review the concept of claims and the main stakeholders involved in a construction claim in an attempt to capture the main concepts such as claims, types of claims, delay analysis and disputes prior to engaging in exploring management of claims and methods of substantiation.

3.2 Claims Management Conceptual Framework

With the review of the literature which explores the types of claims and their nature, a link can be identified between the causes and effects of claims. However, the essential link is the one which indicates the current practices in claims management in construction projects and the ideal practices which need to be considered by construction professionals.

A comprehensive claims management system is then the one that will encompass all that is needed to substantiate a claim as adequately as possible. In order to develop the conceptual framework, the current industry practices need to be reviewed. Only then can a claims management system be developed to meet the expectations of construction projects and contractors. These practices are later identified within this chapter as failure factors.

Figure 3-1 includes some of the necessary terminology and concepts which has been explored in this research. These concepts are crucial for the understanding of the dissertation workflow and conceptual framework it encapsulates. The research has been designed to consider these concepts as the core of the conceptual framework and was reviewed in both the literature and in the analysis chapters to try and achieve the success factors across this chapter.

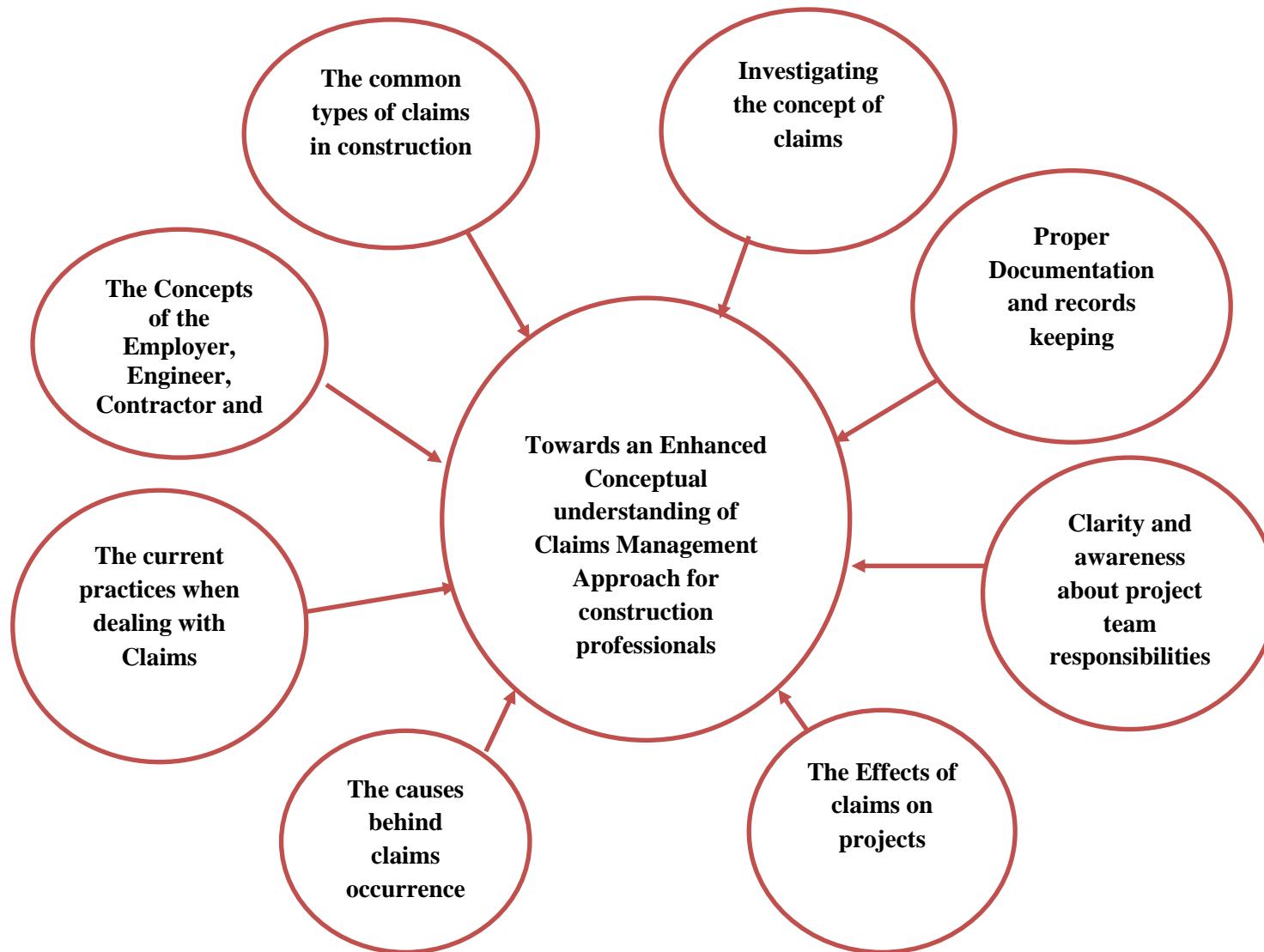


Figure 3-1: Concepts Reviewed in the Research of Claims Management

3.3 Current Claims Management Practices

In order to properly survey the issue of claims and methods of enhancing claims management and substantiation, the current industry practices need to be reviewed. This data can be collected from interviews conducted with industry professionals as shall be demonstrated in chapter four. Simultaneously, the current practices need to be compared and contrasted with the literature and suggested practices scholars have applied or concluded in their research.

Moreover, the failure factors have to be highlighted with regard to current industry practices in claims management. With this in view, the following factors have been developed to define the various failure drivers which impose an obstacle on the proper management and substantiation of claims or which are considered as problematic to the process of claims management and substantiation. The same can be considered as pre-implementation aspects of a successful claims management system.

Critical Failure Factor (1): Ignorance of the impacts of Change & Change orders

Ignorance of change and change order impacts. This accordingly leads to acceptance of change without study of the impacts and evaluation of the consequences. Documented and well proven changes are an essential component of a Contractor's claim for additional cost and times which need to be addressed at all times.

Critical Failure Factor (2): Lack of Strategy

The lack of a clear strategy and strategic project management principles leads to loss of objectives and focus within the Contractor's organization. Furthermore, poor strategic planning and management result in the absence of a mission and vision for the project as a whole and not just the management of claims.

Critical Failure Factor (3): Team Weakness and Lack of Awareness

Team weakness and incompetence result in ambiguity and lack of clarity on the reporting of issues, in addition to confusion in matters of what needs to be conveyed

to management and what does not. Lack of competency leads to mismanagement of the project and can have reversal effects where claims are concerned.

Critical Failure Factor (4): Poor Project Planning

The failure factor of poor planning and program updates occurs in the event of deviation from the master program (baseline) without providing updated recovery plans or necessary as-built work program in the Claim summary. Baselines, updates and as-built programs are all fundamental aspects used by claims specialists in substantiating claims and demonstrating delay analysis.

Critical Failure Factor (5): Failure of the Contractor to identify Concurrency of Delays

Concurrency of delays may result in rejection of additional claim for money if one of the delays is caused by the contractor's failure. Concurrent delays are two or more delays occurring at the same time when one or more delays maybe due to the Employer's failures rather than the Contractor's fault.

Critical Failure Factor (6): Gold Plating

An improper record of events is the result when the Contractor accepts additional work without account for cost or time. Gold Plating can be defined as provision of minor or major additions to the project features free of cost and without proper documentation or reference to the contract.

Critical Failure Factor (7): A Biased Engineer

A biased Engineer can cause a misconception to occur of the contractor's claims and entitlement and loss of right. The Engineer who does not administer the contract impartially at all times is considered as a failure factor to the Contractor's claim. If the

Engineer tends to be biased to the client, the interests of the Contractor can be jeopardized.

Critical Failure Factor (8): Improper claim formulation

Improper claim formulation may lead to the rejection of the Contractor's claim and consequently create alienation, dispute and conflict among the parties concerned. This situation may also arise due to the incompetence of an appointed specialist who is not well-experienced in handling and formulating claims.

3.4 Critical Success Factors for Claims Management

The main factors of success where claims management is concerned are the ones which reflect to what extent the claim is substantiated adequately. These factors can be taken as the basis necessary for structuring claims management systems.

Critical Success Factor (1): Proper understanding of the objectives at the project initiation phase

The project commencement phase is one of the most important stages in projects as far as claims are concerned. The very early stages of a project are the stages when claims begin to arise due to various reasons such as delay, change and design issues. At this stage, ambiguity tends to create a series of risk due to improper information and unclear objectives which result in changes and consequently end up in claims for EOT and extra costs.

Critical Success Factor (2): Project Documentation and Record Keeping

A key success factor in claims management and substantiation is the project documentation system and the maintenance of proper records. The better the documents related to the project are maintained, the easier the task is for the claims managers to formulate their claims. With the ease of access and availability of the data needed for substantiation, claims managers can accelerate the process of development and presentation of the claim to the Employer.

Critical Success Factor (3): Team Members' Role Identification & Awareness

Another important success factor in claims management is the identification of every individual's role within the project organization. The common understanding is that claims need to be handled at the managerial level only and that the construction team have little to contribute.

The misconception of the duties and roles of the team members in claims is recognized by (Dobbin, 2006) as one of the deficiencies which impact the proper record keeping of claims. Hence, it is essential for each individual within the organization of a project to be aware of his duty with regard to claims. The Project Manager is therefore obliged to clarify to his team the various tasks they need to complete in order for the potential claims to be well-structured.

Critical Success Factor (4): Monitoring the Work Program

The master program of any construction project is usually referred to as the baseline program (FIDIC, 1989). A baseline program is very essential since it allows the program of work to be conveyed to all parties (Keane & Caletka 2008, p.43). This program includes all the activities which correspond to the project lifecycle.

Furthermore, this program includes what are known as the milestones of the project. PMI (2008) defines a milestone as a significant point or event in the project. During the execution of works, any change in a milestone due to a variety of reasons needs to be accurately monitored and managed. This task is usually assigned to the planning department, who report such deviations or delays in milestone achievements to the project management. The importance of monitoring a work program comes as an essential step so that the reasons behind delays can be duly recorded and used later to substantiate the claim.

Critical Success Factor (5): Changes and Change Orders

Change and change orders are among the clearest and most common drivers for the claims submitted by the Contractor. Change orders are approved change order requests, where the architect and owner have agreed that the contractor is entitled to an increase in the contract sum (and sometimes additional construction time as well)

(Winkler and Chiumento 2009, p.188). It is then evident from this definition that change orders are acknowledged sources of delays and can greatly contribute to the betterment of a claim and entitlement for time as well as cost. The proper formalization of changes by the written consent of the Engineer is a crucial success factor in claims management.

Critical Success Factor (6): Timeliness of Notification

Timely notification of claims to the Engineer and Employer is an essential factor to be considered at every stage of the project. The Contractor's project manager is thus supposed to conduct periodic reviews of the project progress and convey formally to the Engineer the intention to claim for either additional time or money or both in the event in which a cause for a claim arises.

Non-timeliness of notification can lead in many instances to the Contractor's right being denied by the Employer who can simply justify his rejection to non-awareness of the circumstances or events. For this reason, the Contractor is required to be timely by notifying the Engineer about his intentions prior to submitting his claim. According to scholars like Bunni (2005), this procedure needs to be done with a written notification of the delaying event to the Engineer with a copy to the Employer within a specified period or a reasonable time.

Critical Success Factor (7): The Formulation of the Claim

Once the components of the claim are available, only then can the Contractor start formulating his claim. The formulation of a well-structured claim is thereafter the responsibility of the appointed claims specialist or in house claims personnel who undertake the task of furnishing and substantiating the claim.

Critical Success Factor (8): Strategic Project Management

Strategic project management is probably the foremost of the factors of success to be considered in any claims management process. This is attributed to the fact that strategic project management combines project management techniques along with business or corporate strategy to achieve the overall sought goals of a project (Grundy and Brown, 2002). This statement can be explained in the context of claims as claims

which not only have an impact on the progress of the works and internal project issues, but also have an overall impact at the corporate level and upon the well-being of the Contractor's business affairs.

3.5 Chapter Summary

The conceptual framework chapter has provided an insight into the success factors which can be considered critical to claims management implementation and substantiation. It has also reviewed the current practices of construction professionals whilst handling claims and the setbacks of these current practices demonstrated as the critical failure factors.

With the foundation created by conducting the literature review, the framework can be further explored by investigating real life projects and case studies which can consolidate the concept of claims management and substantiation from the data to be yielded and analysed in further chapters. Figure 3-2 is a model developed to summarize how the ideal claims management system needs to perform, by defining the contractual framework of claims management.

The model is constituted of the inputs to the claims management system. Following the formulation and presentation of the claim, the claim is then either settled amicably or not. In the circumstance that it is not settled, the Engineer is required to prepare his determination of the claim worth. Should the parties concur to the resolution presented by the Engineer, the claim is then settled. Otherwise, the claimant resorts to other methods of resolving the dispute with the Employer by either arbitration, litigation or other known mechanisms. Nevertheless, to explore the model set in figure 3-2, the concepts represented in figure 3-1 need to extensively reviewed.

Chapter five will explore in further depth the various critical success factors and critical failure factors identified earlier. This can be achieved through the design of the interviews to be held and in the type of questions which will be raised with each of the interviewees.

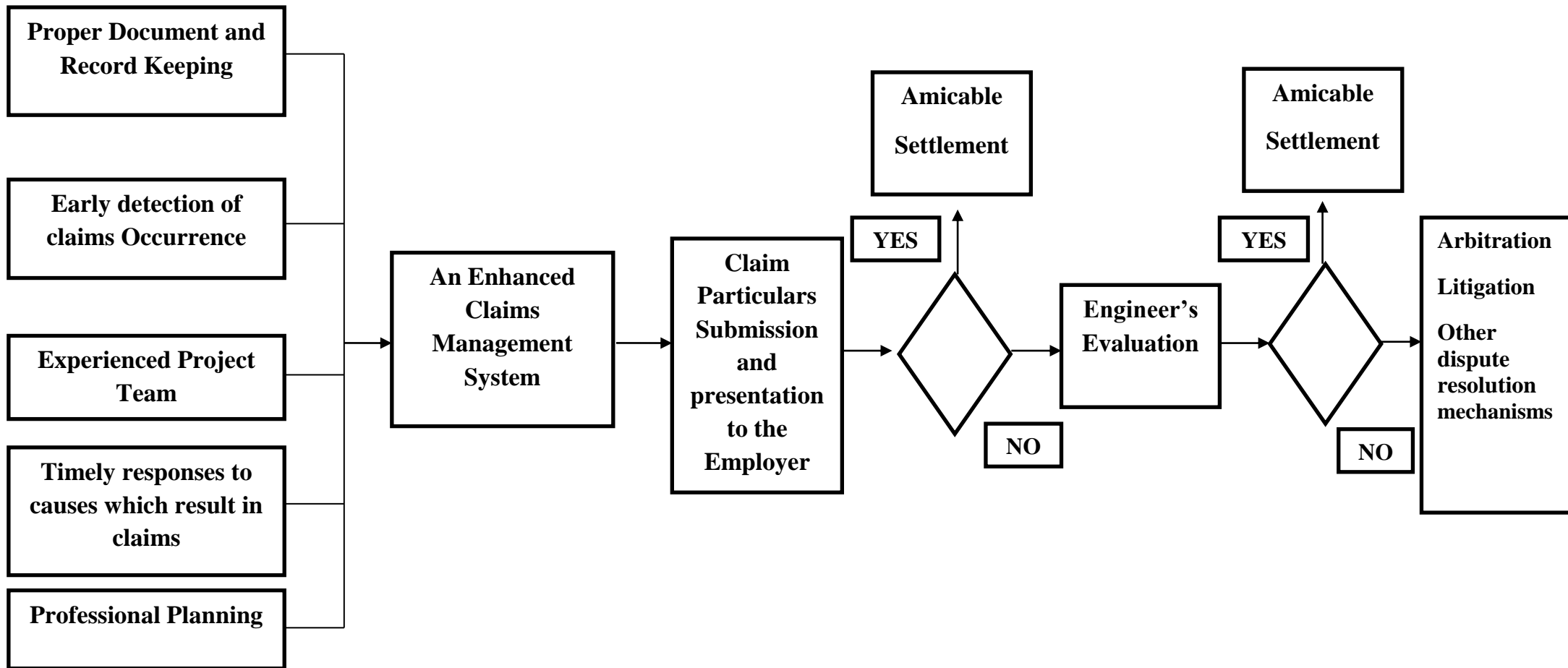


Figure 3-2: The Contractual Framework of Claims Management (The Idealistic View Model)

CHAPTER FOUR– METHODOLOGY

4.1 Introduction

Saunders et al. (2009, p.5) define research as “something that people undertake in order to find out things in a systematic way, thereby increasing their knowledge”. The research covering Claims management and substantiation handles managerial problems faced by construction profession practitioners. Therefore, this dissertation is intended to increase existing knowledge on claims management practices. The nature of this dissertation may appear to be exploratory yet it may be followed by descriptive and explanatory approaches since research design may apply more than one approach (Fellows and Liu, 2008).

To successfully undertake this research, the researcher’s focus has not only been on providing findings that advance knowledge and understanding, but also on addressing business needs and practical day to day problems incurred by managers (Saunders et al., 2009). This research uncovers the optimum claims management and substantiation methods by investigating the current construction industry practices and problems managers in construction face in the day to day claims handling.

Other primary sources were the use of the qualitative approach by the researcher who after the initial design of the research was completed, selected as his investigative tool the approach that yielded the results most effectively. For example, certain research questions cannot be addressed by using a quantitative approach and can be more successfully conducted through a qualitative approach and vice versa.

Fellows and Liu (2008 , p.95) state that much qualitative research concerns the generation of concepts through the researcher getting immersed in the data collected in order to discover any patterns. With this definition, certain concepts will arise in this research through field research conducted in real life projects. An attempt will be made through the methodology used to try and review the projects as cases from which certain findings can be deduced and conclusions and recommendations can be drawn on the issue of claims management in the United Arab Emirates.

4.2 Research Approach

Kothari (2004, p.5) classifies approaches to research into two approaches: *quantitative approach* and the *qualitative approach*. In this research, the *qualitative approach* has been considered as the direct approach most suitable to complete the research. This is attributed to the fact that qualitative research can be sometimes defined as *interpretive research*. The research requires interpretations, and, in fact, human behavior requires interpretation minute by minute (Stake, 2010).

At the start of any research journey, the researcher needs to have a research design in situ. The research design is not limited to work plans but goes beyond to ensure that any gathered evidence has to address the questions raised during the engagement in research (Yin, 2003). Moreover, in order for the research questions and evidence gathered to be aligned, the research needs to be designed accurately. In this dissertation, one firm has been chosen as part of the research design process. However, it was necessary to cover more than one project organization within the same firm to be able to draw accurate conclusions and consequently generalize as described by (Yin, 2003).

On the other hand, the exploratory nature of the research topic is another factor that has made the qualitative approach a more suitable approach than quantitative. The descriptiveness is attained by finding answers to questions which begin with: Why? How? In what way? (Hancock, 1998). Such questions are found to be ideal for the topic explored and described in this dissertation. Queries like ‘what are the current practices whilst managing claims?’ Or ‘how can claims management and substantiation be enhanced?’ are all samples of questions necessary for this research, which is why the method of qualitative research was selected as being more appropriate than the quantitative approach.

Another reason for adopting the qualitative approach was that in qualitative research, an investigation takes place on people’s understanding, opinions and beliefs in a raw form which although unstructured yet contains adequate richness of content (Fellows and Liu, 2008).

4.3 Case Study Research

A case study can be defined as a strategy for undertaking research which involves empirical investigations of a particular contemporary phenomenon within the real life context of that phenomenon by the usage of different origins of evidence (Robson 2002; Saunders et al., 2009). It is of great importance before engaging in research to allocate the strategy upon which the researcher will build his methodology. In this research, the strategy was to use case studies, which allowed for the focus on understanding the dynamics inhibited in individual settings (Eisenhardt, 1989). The settings herein referred to are the three projects executed by ABC firm and are the core of the analysis in chapter five of this dissertation. On the usage of case study, Fellows and Liu (2008, p.87) suggest that case study approach can be used in four situations in construction related research and they are

- i. a source of ideas and insights.
- ii. Description of a phenomenon.
- iii. To describe project biography.
- iv. and illustrative anecdotes.

Research methods scholars have explored case study research approaches extensively by setting further definitions for case study approach. Among those scholars is (Yin, 2003) who elaborates on the features of case studies by dividing it into two main features, which are case study as an *empirical enquiry* and case study as an *inquiry*. On the case study as an empirical enquiry, Yin (2003) states that this is achieved by investigating a contemporary phenomenon by its real life context.

On the other hand, Yin (2003) explains the case study inquiry as coping with the technically distinctive situation in which there will be many more variables of interest than data points. The phenomenon described herein is the current practices of claims management in construction projects and how the handling of claims can be improved. The cases or interviewees fall under the sub-category of the overall setting which is the specific project targeted for analysis.

4.4 The Interviews Structure

The interviews conducted for this dissertation were based on the main conceptual frame of claims management and substantiation. During the interviews, the researcher to observe carefully in what can be described as listening, asking good questions, knowing about the core of the topic of study, caring for the data, doing parallel tasks, and persevering (Yin,2011).

The questions brought up in the interviews mainly addressed the issue of claims management and the drivers for claims. Due to the time limitation factor for each interview, the questions were structured into categories touching on the core of claims management and with minimal time requirement per interview. These six categories are as follows:

- General Information Questions.
- Claims Management Questions.
- Claims Substantiation Questions.
- Questions Related to the Role of the Engineer and FIDIC.
- Record Keeping Questions.
- Change and Change Management Questions.

The interviews were semi-structured and held in durations of 15- 30 minutes per interviewee. The nature of the questions enquired can be clearly seen in Appendix (B) and was typical in all six interviews held. The advantage perceived during the interviews was the cooperative spirit of the interviewees and their patience during each interview.

The interviewees were visited individually in their offices. They strictly advised the importance of confidentiality, since the information they disclosed was critical and for which reason, real names were not to be used. The method in which the interviews were held was on face to face basis for as (Gill and Johnson 2001, p.103) have observed, the complexity of the information to be elicited necessitated the actual presence of the interviewer in order for him to explain and elaborate on the more problematic questions.

4.5 The Data Collection

The method in which the data has been collected for the research was based on face to face interviews. This method is considered as a prime source from which qualitative data is usually extracted for case study research. The data collected was obtained from ABC firm projects A, B and C respectively. Interviews were held on one to one basis with two key interviewees in each of the projects. This method of interviews is considered as non-standardized (Saunders et al., 2009). Table 4-1 clearly illustrates the interviewees and the respective project(s) they worked for:

Project	Location	Interviewees	Criteria for selection
Project A	Abu-Dhabi	- Project Manager - Commercial Manager	Direct involvement Direct involvement
Project B	Abu Dhabi	- Project Manager - Commercial Manager	Direct involvement Direct involvement
Project C	Fujairah	- Project Director - Contract Manager	Direct involvement Direct involvement

Table 4-1-Table of the Interviewees

The data collected for this research was obtained at various durations throughout the research period. Access was given to the required contracts, claims and other relevant correspondence found valid for the research. Permission was requested prior to collecting the data from ABC management. The claims submission by ABC for the three projects was also used as a primary source of data for this research.

The other source of data was the three projects documents. The researcher made use of the documents obtained from the document control system and FTP's provided by ABC. Some of these documents are demonstrated in table 4-2, which classifies the documents retrieved and the level of significance of each to the researcher:

	ABC Projects Data	Source	Significance
1-	The projects contract agreements between the Employer and the Contractor	The document control system	<i>High</i>
2-	The baseline programs for each of the three projects.	The planning personnel	<i>High</i>
3-	The Claim submission for EOT, prolongation and acceleration	ABC management	<i>High</i>
4-	Daily, weekly and monthly reports.	The document control system	<i>Moderate</i>
5-	The incoming correspondence from the Engineer and the Employer	The document control system	<i>Moderate</i>
6-	The outgoing correspondence to the Engineer and the Employer	The document control system	<i>Moderate</i>

Table 4-2: The Documents retrieved from ABC projects

The nature of the problem this dissertation covers is a real life problem. This fact made literature reviews another rich and valuable source of data for this field upon which this research strongly relies. Fellows and Liu (2008, p.84) state that in “using real-life problems as the inspiration for research, it is important that this is done with an understanding of the literature”. This is due to the fact that literature helps the researcher to gain some preliminary, but further, understanding of the issues relating to the topics, whether they have been investigated extensively already and of any likely problems (Fellows and Liu, 2008). Nevertheless, a literature search may also bring together the ideas of others (Lancaster, 2005).

Another significance of literature reviews is at the data interpretation level. The ideal interpretations will connect the ideas of interest reflected by the relevant literature with reassembled research data (Yin, 2011). Once the data and literature are amalgamated, the researcher will come closer to achieving his research aim by fulfilling the set objectives. This can be achieved through the address of the research questions raised earlier.

4.6 Validity and Reliability

Validity, reliability, and objectivity are all core concepts related to criteria in qualitative research as described by (Flick et al., 2004). Lancaster (2005) defines validity as “the extent to which the data collection method or research method describes or measures what it is supposed to describe or measure”. The first criterion referred to herein is validity. Yin (2011, p.75) states that “Researchers seek to use strong designs to strengthen the validity of their studies and to ensure that the data to be collected properly address the research topic being studied”.

In this research, the structure of the interviews and type of questions raised in this research are essential and consolidate the validity of the research and fall under the design identified by (Yin, 2009). If the questions of the interview describe or measure whatever it is intended to measure, then it can be assumed that the research method is valid. Furthermore, validity may take various forms as described by Yin (2003) to include internal, external and construct validity.

On the other hand, Lancaster (2005) describes reliability as “the extent to which a particular data collection approach will yield the same results on different occasions”. Reliability is established in this research by ensuring that the interviewees are properly selected. In other words, the more directly involved in the problem the interviewees are, the more reliable the data retrieved will be. Interviewees with more involvement in claims management have more to contribute than interviewees with less involvement in claims, and therefore they become a vital and primary source of data. Another source of reliability which was found by Yin (2003) is the use of multiple sources of data which may include documents and archival records. This can be found in the archival records of the targeted organization in this research for each particular project.

Objectivity problems, too, may tend to surface in the research. To avoid such problems, the researcher plays the role of the unbiased reporter of events, activities or individuals, (Flick et al., 2004). By reporting events and facts impartially, the chances of failure will diminish. In other words, the researcher has to distinguish clearly between fact and opinion to satisfy what is needed to make the research objective (Dees2003; Saunders et al., 2009).

CHAPTER FIVE–DATA ANALYSIS, RESULTS AND FINDINGS

5.1 Introduction

Lancaster (2005) describes the processes in which data analysis goes through as the distillation, classification, identification and communication processes. Accordingly, the three projects which have been examined in this dissertation were projects recently executed by an international construction company referred to as (ABC) were subjected to some extent to these four processes of analysis.

Two of these projects were based in Abu Dhabi and the third was based in Fujairah. The projects referred to have been presented in table 5-1 for clarity purposes and will be further examined in this chapter:

Project Name	Project Nature	Location
Project A	Convention Centre	Abu Dhabi
Project B	16 storey hotel	Abu Dhabi
Project C	Highway	Fujairah

Table 5-1 ABC targeted Projects

The reason the projects shown in table 5-1 have been selected for this research is that these endeavours had encountered the occurrence of claims due to circumstances beyond the contractor (ABC)'s will and control. Consequently, the contractor had to put forward certain claims to ensure both his right for EOT and additional cost. Another reason for the selection of these projects is the presence of the researcher on these projects throughout the construction phases, and who was privileged to access the projects data easily from the management, and this contributed greatly to this research work.

Another factor which played a decisive part in the selection of (ABC) as the focus of this research is that the interviewees were of international backgrounds. This enabled the researcher to obtain data directly from personnel who not only had international experience but who also possessed local knowledge of the UAE construction market and contracts.

The three projects shared certain commonalities which are worth mentioning prior to the engagement in the analysis. These have been summarized in the following points:

- 1- ABC had to claim time and cost in all three projects encountered.
- 2- All three projects were of considerable financial values.
- 3- The three projects are categorized as fast track projects since they were initially intended to be completed in relatively short durations.
- 4- The Contractor ABC was granted EOT in all three projects.
- 5- The final costs of prolongation and acceleration measures taken by ABC have not been agreed or settled up to this date.

With the brief summary of the three projects, the description of ABC firm and extensive analysis is the next step which will be taken in this chapter.

5.2 ABC Construction Company

ABC Company was founded in the UAE in the year 2000. Its establishment came as part of the European mother company's vision to commence operations in the Middle East and particularly in the Gulf region. With over 12 branches worldwide, ABC successfully launched operations in Dubai and Abu Dhabi as a technical construction company capable of undertaking projects of variable sizes and features.

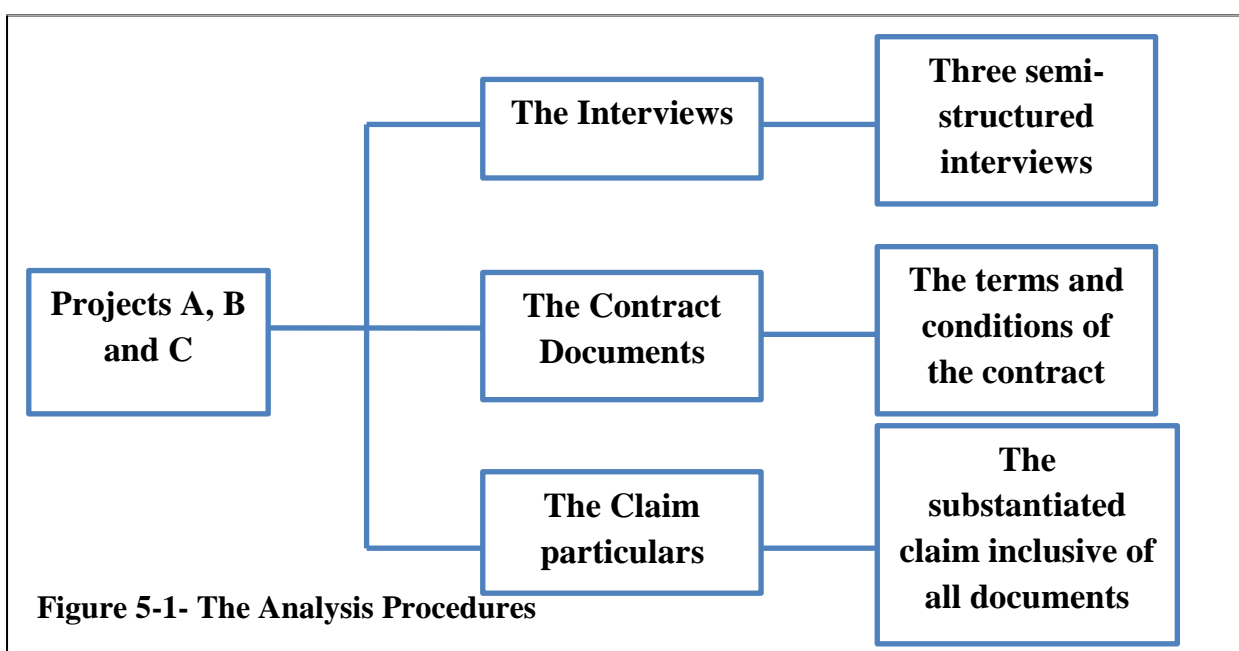
Throughout the years between 2000 and 2006, ABC was associated with many successful projects and this association of the company with state of the art buildings and mega projects contributed to the enhancement of its reputation in the region. As a result, ABC expanded in size and human resources to include over 6,000 employees between staff and skilled labour.

In the period between 2007 and 2011, however, the business expectations for ABC were not fulfilled as anticipated by the corporate management. This came as a result to the fact that the company was executing certain projects for miscellaneous

clients in Dubai, Abu Dhabi and Fujairah which did not meet the expectations of the majority of the stakeholders.

The projects handled by ABC during that specific period encountered either cost or time overrun. With the failure to meet the specified deadlines and budgets allocated for each project, ABC had to maintain its contractual rights for the loss of time and cost by submitting and presenting claims against the Employers. These claims demonstrated the contractor's entitlement to additional time and cost due to delays and events beyond ABC's liability. To this date, the claims are under review by the Employers and the relevant Engineers involved in each project. If the negotiations with the Employers prove fruitless, the ABC management will be left with no other options but to proceed for arbitration or other dispute resolution mechanisms.

The analysis sub-sections will demonstrate the procedures the contractor ABC followed in every individual project. Factual figures related to the claims and how they were developed will be reviewed along with the feedback collected from the various individuals involved in the process of formulating and managing the claims. It is hoped that the analysis summed up with the literature review will contribute profitably to the current corpus of information and result in the establishment of a refined form of claims management and substantiation for contractors working in the UAE. Figure 5-1 clearly summarizes the analysis proceedings in each of the three projects and the direct source of data in each project:



Once the data is collected following the procedure illustrated in figure 5-1, the next step the researcher has to undertake is to categorize the data. Categorisation of qualitative data may rely on the researcher's opinion and objectivity based on rationality, expertise and experience (Fellows and Liu, 2008).

Following the data categorization, a pattern or a relationship may be expected from the review of theory and literature (Fellows and Liu, 2008). Yin (2011, p.219) comprehends that this newly found pattern can become the pillar for creating an innovative interpretation along with the main theme developed by the researcher.

5.3 Analysis- Project A

The convention centre referred to hereunder as project A is the first project covered in the analysis chapter. The project can be described as a convention centre used for the purpose of holding local and international exhibitions and events. The capacity of the convention centre comprises of four halls and two car parking buildings. The construction work by ABC commenced in the year 2007, and was concluded in the year 2009. The facility features can be clearly seen in table 5-2:

	Description
1-	Convention halls 6,7,8,9 and 10
2-	Car Park 1 (G+5)
3-	Car Park 2 (G+4)

Table 5-2: Project A features

The convention centre halls 6-10 were built of steel structure with aluminium envelope and glass for the façade finish. The halls included areas called the back of house and the front of house areas. The front of house areas included facilities dedicated to the organization of events. On the other hand, the back of house areas were to be used as serving areas and provided with roller shutter doors for the entry of equipment and machinery. The first storey consisted of what are called the hospitality suites for the purpose of hosting the VIP guests and the holding of meetings and

seminars during exhibitions and events. In addition to the complexity of the civil works, the complex included many sophisticated electro-mechanical disciplines such as heat exchangers, automated lighting control, building management systems and life and safety systems.

The original contract value signed between ABC and the Employer was AED 770,000,000. Naturally, this value was not the final value agreed upon at the end of the project. Other monetary values were added on during the execution phases which included the EOT claim, costs of prolongation and variation orders.

In project A the Contractor made a total of 7 submissions for extension of time entitlement. The first submission included a request for 120 calendar days. The contractor justified his requirement for the EOT due to delays caused by the Engineer. These delays constitute of the following facts the Contractor formalized during the end of 2008:

- 1- Delay in receiving the pile caps which were executed by the Employer's direct contractor and not ABC.
- 2- Delay in the re-design of the Car Park 2 due to the existence of unforeseen site conditions which made the old design impracticable.

Initially the Contractor had received 30 days as extension of time which were estimated as insufficient by ABC management to complete the project in all its features. Therefore, the Contractor objected in his 2nd submission by emphasising on the need for 120 additional days. After thorough negotiations with all the parties, the Contractor managed to obtain 120 days for completion.

The entitlement for time had secured the Contractor against any liquidated damages or penalties for delay. However, the Contractor realized that the Engineer had issued in total 720 changes in the form of change orders and verbal instructions. The Engineer had eliminated the time impact from these change orders. The Contractor hence was left with no other option but to take acceleration measures to avoid delays occurrence beyond the agreed extended date. In his third submission, the Contractor stated to the Employer and Engineer officially that the measures were

necessary to overcome these continuous delays. In his submission, the Contractor included an As-Planned Impacted delay analysis which reflected the deviation from the baseline program and how this had affected the durations.

With the EOT granted, the Contractor managed to complete within 60 days instead of the 120 days agreed earlier. However, the Contractor believed from a contractual point of view that he was eligible for the following monetary claims:

- 1- Cost of Prolongation beyond the original contract expiry date.
- 2- A total of 120 days of EOT despite finishing earlier.
- 3- Costs of Acceleration measures taken and were substantiated on the fact that all change orders eliminated the time impact and acknowledging the cost only.

Finally and in his submissions 4 to 7, the Contractor demonstrated his cost entitlements for prolongation, acceleration and cost of changes and variation orders. The documents he relied on were in the following sequence:

- 1- The general contract clauses.
- 2- The delay analysis demonstrating the human resources, additional tools, plant and machinery mobilized to site to recover the delays.
- 3- The daily, weekly and monthly reports which included photographs and figures on the daily progress and obstacles faced by the Contractor.
- 4- Commercial invoices demonstrating the additional cost figures which were used as appendices for the claims submissions.

To summarize the total costs, the following simplistic formula reflects the costs for which the Contractor saw himself eligible:

Total= Contract Value+ Cost of Change orders (inclusive of overheads and profit) + Cost of Prolongation + Cost of Acceleration

For a further elaboration on project A claims and other facts, the two candidates who will be interviewed are the project manager and the commercial manager referred to as JR and GH respectively. The positions of the two interviewees

within the organizational chart of project A can be seen in Appendix (C) and are considered as senior managers in the project.

5.3.1 Analysis-Case 1-Interviewee 1

JR is a 60 year old male German national. He held the position of project manager for ABC during the initiation, execution and handover of project A. JR is an architect by discipline, but has been a project manager for over 10 years in the UAE. He played a significant role in the claim which surfaced in project A. His good relations with the Employer and the Engineer contributed to the claim particulars formulation and build up. JR is not holder of any project management or related degree. He acquired the knowledge of project management over extensive years of practice and experience.

JR does not hold any degrees or certificates in project management, but he developed experience in the field over the years. The projects he managed were all pertaining FIDIC as a form of contract. His previous projects were mostly based in Europe and some in Dubai. During his years of experience, he has encountered three types of claims and they are EOT, acceleration and prolongation claims.

JR was asked to define a claim and he responded by saying, *“A claim is an escape from penalties in the event of delays”*. When asked on the types of claims encountered in project A, he answered *“We had an EOT, prolongation and acceleration claim put in place”*. JR affirmed that the claim put forward in project A was not only for the purpose of covering the delays caused by ABC, but were intended to ensure the rights of ABC for delays caused by the Employer.

With regard to the team members upon whom he relied for the claims formulation and management, JR was emphatic in his response. He said, *“I strongly believe that a good claim greatly depends on a good planner, commercial manager and of course me: a project manager”*. He further elaborated by saying *“We also rely on a claims specialist whom we pay on an hourly basis to write the claim, by giving all the necessary input such as the work programs, contract documents ,etc.”*.

On the rules needed for claims management systems, JR stated *“I don’t think I can suggest a claims management system to be followed in construction projects. In this project, we did not follow a certain managerial process other than following steps we did in previous projects such as notification of delays and monitoring of delays occurrence,”*. He further added *“As you are aware, it was a mega project and needed to be completed in a record time which made us overlook the claims occasionally since our target was to try and finish on time”*.

JR also commented on the errors and mistakes which took place in his project by saying *“The problem in project A is that the project was under partnering. In other words, the client tried to convince us that claim submissions are not necessary and that we can solve all disputes and claims amicably without the need for writing letters!!!”* He then clarified his statement by saying *“For a period of time we truly believed that the client is sincere and that we will get our entitlements, especially with the huge number of changes made on almost daily basis”*. JR then said *“I must admit that our trust and belief that partnering will work almost made us lose all our additional right for time, cost and acceleration. I sincerely think that it is really important to record the impacts of changes and delays made by the employer and not to hesitate in conveying them in writing”*.

JR strongly believes in certain elements for the successful presentation of a claim. In this context, he even summarized them as being: a well-written claim and enough proof and substantiation. However, his comment on this was, *“It may seem ideal in words but in practice we have really faced rejection and request for further clarification because we missed out obvious substantiation elements. These of course are some of the errors we fell in and which caused a delay in processing and evaluation of our claim”*.

The next part of the interview was to ask JR about the substantiation of claims. As a project manager, JR contended that the delay analysis was one of the most vital elements needed for substantiating EOT claims. When asked about prolongation and acceleration, he stated, *“Clients usually request through their Engineer or cost consultant to provide supporting documents such as invoices, daily reports or monthly* Claims Management and Substantiation in the United Arab Emirates Construction Sector

reports approved by the Engineer and which demonstrate figures on costs or manpower size or plant and tools used”.

JR also noted that during construction, they tended to neglect taking enough photographs or keeping track of some of the changes which were directed at site without written instruction. He said, *“I think the role of the planning department or engineer is to daily record the facts and send them officially to the Engineer. Such documents can be used later on to demonstrate our entitlement and consolidate our claim”.* For the presentation of the claims, JR stated that this takes place during progress meetings, where the key members involved are claims specialist, commercial manager and planning manager.

The next step in the interview was to elicit JR’s appreciation and evaluation of the Engineer’s role in the administration process and what his perception was of FIDIC. When he was asked about the role of the Engineer in claims, JR promptly answered *“FIDIC gives the Engineer the right to evaluate the claim submitted to us as a contractor, but that evaluation at most instances is not accountable when the Employer has no intention to grant time or cost to the Contractor”.* In the case of project A, JR said, *“The Engineer gave his determination and the client appointed a 3rd party to evaluate the claim. This only means that the client is not happy with his Engineer’s assessment, even though I believe the assessment was not fair money wise”.* JR also remarked on the Engineer’s performance by saying *“The engineer has not acted impartially in project A, and I don’t blame him. After all, he is paid by the Employer and impartiality may mean clash of interests which the employer is not paying money for”.* JR commented too on the fairness and integrity of the Engineer that, *“Again I repeat, Engineers are not exercising fairness due to fear and allow me to call it intimidation, because at the end of the day the Engineer gets his payroll from the Employer, and that makes a weak Engineer vulnerable”.* On the suitability of FIDIC as a form of contract, JR strongly believes that there is nothing wrong with FIDIC, but the problem is with the people who use FIDIC. He explained this by saying *“Employers here tend to be selective, in the sense, they extract certain clauses which serve the Employer only and use them in the general terms or conditions of the*

contract and they somehow tend to overlook the clauses which protect the contractor, but that of course is in limited situations”.

JR was then asked about the importance of records keeping and management. He asserted that the most important documents used to formulate the claim are the various incoming and outgoing correspondence to the Engineer and vice versa. He also admitted that the document control system adopted was simplistic and was filed in the *conventional* way, which meant in hard copy files with a simple excel sheet as a log controlled by one document controller and an assistant. JR also acknowledged that this was a rather primitive method, considering the complexity and enormity of data needed to be recorded for project A. He even commented on this by saying, *“It is sometime hard to track certain letters which were sent to the Employer, which is somehow annoying especially when I have to report back to top management”*. However, JR added that the most important files or documents, other than the baseline program, were kept aside in a separate file in his desk drawer. These included important notifications and the claim submission.

The final part of the interview held with JR was related to change and change management. In this section, JR emphatically attributed cost deviations borne either by the Employer or Contractor to the occurrence of changes. He also stressed that changes during implementation are more critical and are of higher impact than the ones at the initiation. Nevertheless, he believed that both types, whether in initiation or implementation, resulted in claims occurrence.

The main reasons for change occurrence in JR’s opinion area poor or incomplete design, a weak Engineer and a client who doesn’t know what he wants at the design stages. From a contractor’s point of view, JR stated *“The more changes occur the more contractors make money, especially if the changes have considerable value and time for execution as they are often a winning card”*. On the impacts of changes, JR asserted *“If changes are not managed well by all parties, they may result in higher risk which will impact the delivery dates and project budget as has happened in project A. On the other hand, they mean more time and cost for the contractor if he succeeds to prove his case by presenting a well-established claim”*.

5.3.2 Analysis-Case 1-Interviewee 2

GH is a British national of 40 years of age with experience of over 10 years in construction projects and commercial affairs. He worked as a commercial manager for a period of only 3 years on project A along with JR. He is considered as a claims professional although he does not hold a degree in engineering or construction related disciplines. Furthermore, he does not hold any certificates such as PMP or similar international accreditations but has attended training courses and seminars in quantity surveying and dispute resolution in the United Kingdom.

When GH was asked about his definition of claims, he answered without hesitation “*Claims are the assurance of right made by the Contractor*”. He further identified the types of claims he had encountered in previous projects as being EOT, prolongation and on some occasions, acceleration claims. In project A, GH acknowledged that there were three types of claims. Two of these were direct and obvious and they were the EOT and prolongation claims. However, the 3rd claim was more complex as it involved acceleration measures to recover the loss of time which consequently resulted in a loss of productivity claim.

GH denied the fact that the claims in project A were initiated to cover any delays caused by the Contractor ABC. On the contrary, GH said “*Project A did not face any concurrency if that is what you are referring to*”. GH went on to say “*For a fact, I must say that a lot of thanks for the formulation of the claim goes to our planning department, since their efforts exerted in the delay analysis helped a lot in the formulation of the claim and I truly believe that the planning team is a very vital part of the claim process*”.

In his response to the rules for claims management systems, GH answered that the best claims management system is the one that identifies the delay and elaborates on it. Therefore, GH emphasized on the fact of proper delay analysis as a rule of thumb for any claims management system. GH noted that a claims specialist on board can also be of great assistance. Furthermore, GH stated that they had perceived certain errors which were common in all claims he had witnessed in the past. These errors included lack of substantiation in certain cases of the claim. However, he asserted that

Claims Management and Substantiation in the
United Arab Emirates Construction Sector

this did not harm their stance since they provided addendums to the claim. A successful claim presentation as perceived by GH is the one that encompasses the situation's reality without exaggeration, and in this context, he noted *“Some contractors tend to exaggerate their figures in hope of obtaining a limit, which even though is less than claimed yet it is sufficient to cover losses and eventually make the project profitable”*.

GH summarized the lessons learnt from project A as being the essence of a well-established claim. He commented, *“We have suffered in this project from not giving in timely notices to the employer. This made things seem normal and that we were content and more than happy to accommodate any changes made with no extra time.”* He further said, *“Notifications are part of the claim and are integral to keeping all parties on the same channel; otherwise the consequences will be harsh and when I say harsh, I mean for all parties”*.

When asked about the components of proper substantiation for claims, GH answered simply by saying *“Accessing all the necessary documents needed whenever needed easily”*. GH also believes that such documentation and maintenance of records needs to be done during the construction phases and falls under the responsibility of all team members to report any delays or abortive works instructed verbally by the Engineer or Employer directly at site. GH concluded by saying *“I sincerely believe that every construction team member has the obligation to maintain his company's rights, by merely reporting events and opposing directives the management is not aware of”*.

During the interview, speaking on FIDIC and the role of the Engineer, GH expressed disappointment. *“In my years of experience in the Middle East, I rarely encountered an Engineer who acts impartially. There is nothing wrong with FIDIC as form of contract so long as the administrator of the contractor expresses fairness”*. He added, *“The Engineer has been silent in the case of our claim, which to our disappointment makes it a challenge for us to argue further with an Employer who is convinced he owes us nothing but the time he granted us.”*

GH agreed that document control and records keeping are very vital and necessary. He identified the documents essential for the claim from his perspective as being the baseline program and all incoming and outgoing correspondence. He emphasized, however, that despite the relatively primitive system of keeping records, he had no complaint about the accessibility to whatever documents he needed whenever he needed them.

Change and change management were the final topics in the interview held with GH. Based on his comments, it was clear that he believed changes indeed contributed greatly to either increasing the cost or reducing it. GH said “*Clients may decide to add features which are a positive variation or may reduce scope which falls under cost saving or negative variations*”. He attributed these changes to additional needs perceived by the Employer in the execution stages which were unforeseen at the start or to insufficient time given to the designer to complete his design. He further added that changes during construction are more critical than the ones at initiation. Nevertheless, changes do have impacts which maybe positive or negative based on the concerned party’s view and definitely are related to claims as corroborated by GH.

Finally GH concluded that project A was granted an extension of time. However, to date, the claim for additional monies has not been settled or agreed upon with the Employer. At this stage, the Engineer is no longer involved since his determination was not agreed by the Contractor ABC. The next step, as GH sees it, is to proceed with arbitration since the amicable methods of settlement have not succeeded. The claim in project A as visualized by GH is achievable and he has faith that the case will be settled in arbitration without resorting to litigation or any other legal proceedings. His admission of the existence of certain flaws in formulating the claim has not affected his confidence in the ability of ABC to achieve its entitlements.

5.3.3 Identified Similarities and Differences

Both JR and GH are project management professionals despite not holding any certifications in project management or international accreditations. They both enjoy numerous years of experience in construction projects in the Middle East. While analysing the general information section of the interviews held for project A, both interviewees shared a lot of commonalities in their sense of knowledge and the familiarity with FIDIC as a recognized form used in construction projects contracts in the United Arab Emirates. Neither of the interviewees has attended previous seminars or training courses on claims management. However, both interviewees confirmed their direct involvement in construction claims in project A. The general information feedback of the interviewees has been summarized in table 5-3 and can be applied to the other four interviewees in the sections to follow:

	General information feedback	Interviewee 1	Interviewee 2
1-	Experience in management of projects	√	√
2-	International project management certifications or related degrees	X	X
3-	Familiarity with the form of contract followed in construction projects	√	√
4-	Involvement in the construction claims arising in projects	√	√
5-	Attendance of seminars or training courses related to construction claims	X	X

Table 5-3: Project A General Information feedback

No differences materialized during the interviews of JR and GH. Both answered the questions in very similar contexts. In other words the commonalities were overwhelming in the responses presented by the two interviewees in project A.

5.4 Analysis- Project B

Project B was another project executed in Abu Dhabi by ABC. The project by nature was a four star hotel and constituted of a ground floor and 16 typical storeys. The owner of the project is a well-known international hotel services provider who decided to construct this project in fulfilment of Abu Dhabi's need for more hotels. The overall contract value of the project was AED 500,000,000.00. The features demonstrated in table 5-4 represent some of the aspects of the project which were retrieved from the project data and plans:

	Description
1-	450 Guest Rooms
2-	2 restaurants
3-	3 bars
4-	A swimming pool +Sauna + GYM
5-	2 kitchens

Table 5-4: Project B Features

The works on Project B officially commenced on the 1st of March, 2007 and were intended to be finished by the 31st, August, 2009. However, the contractor was granted an extension of time to finish officially by 24th of October 2009. Similarly, as in the case of project A, ABC had the gratuity of extension of time, cost of prolongation and variation orders. The value was then further expanded to include all the other costs.

The major costs incurred by ABC and demonstrated in their claim were the costs of prolongation. Some of these costs are represented as follows:

- 1- Direct and Indirect staff costs.
- 2- Labour expenses.
- 3- Cost of prolonged equipment and plant.
- 4- Head Office overheads.
- 5- Sub-contractors prolongation costs.
- 6- Prolongation cost of insurance.

7- Loss of labour productivity due to the acceleration measures.

The second claim which came in place was the claim related to the acceleration measures taken by the Contractor. These as asserted by the contractor were initiated on the basis of 600 different change orders. The immense change orders as classified by the Contractor resulted in massive delays which in order to overcome, the Contractor had to take acceleration measures. The changes were major and significant and involved demolition and re-work which were both time and cost consuming activities.

Another delay driver identified by the Contractor was the late award of the fit out and other packages which were believed by the Contractor to have further contributed to the overall delays. A total of 20 different packages estimated at a value of AED 30,000,000.00 were awarded at variable time spans throughout the execution phases of the project. The initiation of these packages inspired the Contractor to have them included as part of the EOT and acceleration claims as identified changes. Notwithstanding the profit and overheads margin of 12% which were considered as net profit, the packages were considered as an obstacle to the timely completion of the project.

For the proper substantiation of the claim, the Contractor had to present the various change order logs and documents as part of the claim structure. Other documents such as the baseline program, impacted program and delay analysis were also found fundamental for the overall proper substantiation of the claim.

The overall durations granted to the Contractor were sufficient to complete the project within the boundaries of the EOT. However, the costs of acceleration, prolongation and change orders were later disputed by the Employer under the alleged cover of having concurrency of delay and that the contractor had not mobilized sufficient manpower and resources. This was challenged by the Contractor who demonstrated the manpower on site during the peak intervals of the project.

The overall organizational structure of the team working on project B is demonstrated in appendix (D). The interviewees in this project were the project manager and commercial manager referred to as SH and GV respectively. Their feedback was taken as part of fulfilment of the analysis of project B.

5.4.1 Analysis-Case 2- Interviewee 1

SH is the senior Arab project manager, who has been working for ABC for approximately 8 years. His designation in project B was project manager. He is 50 years old and is a holder of an architectural engineering degree. He has wide experience, having worked for a total of 15 years in managing construction projects in the UAE. The projects he has managed range from commercial to residential buildings. SH was a key interviewee as his experience in managing projects which incurred claims is of great significance. Notwithstanding the fact that SH does not hold any international certificate in project management, yet he has attended many workshops and seminars on claims and mostly LEED training courses.

When SH was asked about the form of contract used in the UAE, he answered that clients had used FIDIC in all his previous projects. He said, *“As far as I recall, FIDIC has been the form of contract used by clients in the UAE and will go on for the years to come”*. He also confirmed that he is directly involved with the claims in project A. SH defined a claim by saying *“Claims are opportunities to turn a project, which is under budget, into a profitable endeavour”*. When he was requested to elaborate, SH stated that in projects, which are usually under-priced by the contractor in an attempt to win the tender, once the contract is awarded, changes become a daily happening which increase the project cost and accordingly, the contractor's profit. He further elaborated by saying *“In the recession, it was tough to compete with low bidders. This drove companies to drop their prices in hope that they will compensate losses or increase margins through change orders and claims. In theory, this sounds workable but in practice it tends to be risky”*.

In common with all his previous projects, in project A too, SH identified the types of claims as being prolongation, acceleration and EOT. He admitted that the claim ABC had submitted for EOT was partly to avoid LD's and delays for which the contractor is usually held accountable. However, he stressed the fact that this was minimal compared to the delays resulting from the Employer's change orders and modifications during execution.

The team SH greatly relies on in the formulation of the claim are his planning department, technical manager and commercial manager. SH explained his reason for

selecting these three members. He stated, “Claims *specialists are fortunately not technical experts in construction. Therefore, the feedback given from the technical and planning team is very essential in the sense that they help edit the claim to amend any mistakes about technical facts. After all, the claim specialist only writes these facts and at many times is not aware of the technicalities which may produce ambiguity and errors*”.

The basic rule SH set for a successful claims management system was for frequent internal meetings to be held between the various departments involved in the claim formulation and the site team in order to continuously update and report events which may not be known to the other parties. In other words, SH stressed that proper communication channels would enable all parties to contribute their input to the claim. When asked on the errors he usually saw in the presentation of a claim, SH stated that they were usually typographical errors and not significant factual events. He went on to say, “*I am proud to say that the claim on project B is a successful presentation. Unlike other projects, mistakes and errors were minor and negligible*”. The lessons SH learnt from project B were that changes and change orders need to be documented. He says “*The moment the Engineer makes a verbal directive we immediately confirm it in writing to maintain our rights for time and cost*”.

A properly substantiated claim as SH sees it is the claim which includes clarity in its body and therefore does not permit the reader or the assessment team to question the facts recorded. In other words, wherever there is a fact mentioned, it should have supporting documents such as notices, instructions or analyses. SH affirmed again that his technical and planning team, along with the hired specialist, were the key team members who contributed to the proper presentation of the claim.

The role of the Engineer in SH’s opinion did not differ much from those of the previous interviewees. He simply noted that the Engineer is a helpless entity where claims are concerned. This leaves the Contractor alone with the Employer to battle for his rights. However, where granting EOT is concerned towards the end of the project, the Engineer consults with the Employer and grants the Contractor the time. Money, on the other hand, is never settled earlier but takes more time to negotiate beyond completion of works, according to SH. On the question of impartiality, SH noted that

throughout his years of experience, impartiality was never synonymous with FIDIC. He amplified this by saying “*FIDIC may call for an impartial and fair Engineer, yet the circumstances usually work opposite wise*”. SH believed that certain clauses in FIDIC which indemnify the contractor need to be amended, especially when these do not serve the contract but serve one party against another.

On the subject of documents and record keeping, SH had little to say other than expressing his satisfaction in being permitted full access to whatever document he needed. According to him, documents can be found any time, whereas the contents of these documents were of greater significance to him. The documents identified by SH as being most critical for the claim formulation and submission was the delay analysis method and the supporting documents for each fact aside.

SH identified changes and improper change management as a significant contributory factor to cost escalation in construction projects and particularly in project B. He also pointed out that changes post contract award are also influential whether at initiation or during implementation. Whilst talking about the drivers for change, SH immediately held the Engineer responsible for the occurrence of changes, claiming “*Engineers are more commercial nowadays and seek to take over as many projects as they can, regardless of the quality of design they can deliver*”. SH directly linked claims to changes. He defended his position by saying “*With change comes delay and with every delay there is a claim*”. The interview was completed when SH asserted with a smile, “*Changes are the best encounters a contractor can use to defend his contractual position and earn some more money*”.

SH concluded the interviews by saying that despite the disputes due to the occurrence of claims, the relationship of the Contractor with the Employer remained normal. Communication is on-going between ABC and the representatives of both, the Engineer and the employer, at the moment of writing. SH even stated “*I don't sense any kind of enmity or hostility between us; on the contrary, meetings have always been professional when talking on the claims, even though they are not fruitful and satisfactory to us in ABC*”.

5.4.2 Analysis-Case 2- Interviewee 2

Interviewee 2 in project B was GV who is a 57 year old male working for ABC for almost 4 years. GV, who is a British national, holds a degree in quantity surveying from the UK. He acquired knowledge of claims through continuous involvement and practice in construction projects worldwide. He has served in the UAE for almost 10 years, having worked with other professional contractors based in Abu Dhabi. GV was the commercial manager for project B and the person who contributed to the formulation of ABC claim in this particular project. GV does not hold any certificates related to project management but has attended several courses in quantity surveying and commercial management of construction projects.

GV defined claims as “the *guarantee for the contractor’s rights*”. In his past experience, GV had encountered prolongation, EOT and acceleration claims. He pointed out that these three have occurred in project B as well. GV added that the claims were the direct result of delays caused by the Employer and the Engineer and had nothing to do with delays by the Contractor.

The team GV usually sees as essential for claims formulation are the commercial manager, project manager and the planners. He feels that the three are the key personnel who contribute most to enhancing the claim as a position, in addition to the presence of a claims specialist. However, GV feels that despite all the parties who are involved in the claim preparation, mistakes and errors continue to occur. The examples of errors he gave were mostly related to lack of substantiation of certain elements of the claim and in some instances, certain contradictions.

The lessons GV feels he has learnt from project B are mostly related to the necessity of having change orders documented. He clearly mentioned that in order to manage claims well, changes have to be noted down and recorded. He affirmed, “*Some of the mistakes we committed on project B were not to document some of the major changes. I am surprised how the site team sometimes accept to change certain features at site without at least referring to their management. This really does harm more than benefit although it may seem as a gesture of good intentions*”.

When GV was asked about the proper elements of claims substantiation, he promptly answered “*I guess everything we consider as not important at a certain*

stage of the project, turns out to be of significance to our claim. I cannot specify those documents, but can say that they are of a considerable quantity'. On the claim presentation, GV added that the role of presenting the claim largely falls on the shoulders of the claims consultant and the commercial manager. He also contended that the project manager was a key player since he was the overall manager in the project and was empowered by the senior management.

The interviewee was then asked questions on the role of the Engineer and on his stance on FIDIC. GV felt that the Engineer had not been granted enough power by the Employer in project B. He said, *"Although FIDIC gives the Engineer administrative powers, yet in reality the Engineer is not practicing his full authorities, I feel that the Engineer in our project is a document controller who passes our letters up to the Employer and vice versa. Other than that, I have not sensed a true effective presence for the Engineer"*. GV further asserted that the FIDIC is a relatively reasonable form of contract if it were applied as whole and not in partial chunks according to what suited a party's interests.

GV expressed his annoyance with the document control system in practice. He felt that the system was slow and certain letters which had to be sent to the Employer were sometimes delayed for trivial reasons and that delay sometimes extended over a period of several days. He also expressed his frustration at not being able to find documents in soft copies. GV said, *"I wonder why we cannot have all letters provided in soft copy on a server reachable by certain parties to maintain privacy, instead of having to look in bulky files which are wastage of time and sometimes paper"*.

The interviewee then spoke about change and change management. He found that change was of very high significance and a direct cause of cost rise in construction projects. GV also saw changes as significant whenever they occurred, whether at initiation or during construction. He found that the occurrence of change to a deficiency in understanding by the Employer to his needs in not giving sufficient time for the design completion and to the fast track nature of the project which made it inevitable for changes to surface. In conclusion, GV linked changes to claims and found that changes in most cases were beneficial from a Contractor's perspective since they were acknowledgements by the Employer of delays on his part.

5.4.3 Identified Similarities and Differences

Both interviewees in Project B expressed their understanding of claims and the various types of claims they had witnessed on the project. On the elements of claims management, both SH and GV agreed on the majority of the elements. Both participants concluded that dependency exists for planning, commercial and 3rd party specialists while formulating claims. Conversely, the interviewees did not agree on two aspects which were the accessibility of important documents in a timely manner and timely notifications of the occurrence of delays. SH saw these aspects as crucial to claims management. However GV did not mention them as being essential. Another difference noticed was with regard to the usage of claims to cover delays. GV's view was that claims are used by contractors to cover delays. On the other hand, SH disagrees by assuming that there were no delays by the contractor.

SH and GV agreed that FIDIC is a suitable form of contract. Both expressed their dismay on the role of the Engineer. Both contended in the interview that Engineers were not assessing claims the way they were supposed to. They perceived the Engineer to be biased and not acting impartially in administering the contract.

SH attributed the occurrence of changes in the project to poor design. However, GH saw fast tracking, poor design and lack of clarity on the objectives by the Employer as the main drivers for change. With respect to the period in which change is more effective, both interviewees agreed that changes are significant whether made during or pre execution stages. Change was seen as beneficial by both interviewees and was directly linked to claims.

5.5 Analysis- Project C

Project C is the last project of review in the analysis chapter. The project, a highway interconnecting two of the UAE's Emirates, was envisioned for the purpose of saving commuting time between Fujairah and another Emirate. The overall project was 20 kilometres of four carriageways per side and two bridges.

The overall contract value of the project was AED 440,000,000.00. The project was a highway constructed in Fujairah which interconnected it to other Emirates. Project C was governmentally funded. The project is considered as vital to the UAE since it saves commuting time from Fujairah to the neighbouring Emirates.

The contract signed by ABC and the Employer was a re-measurable contract. In other words, the Contactor was paid on measurement and quantity based on pre-identified rates for each activity or item through what is known as a Bill of Quantities (BOQ). During initiation, certain elements of the highway needed re-design to due to the fact that the Engineer had not taken into consideration existing utilities clashing with the intended route of the highway. In this event, bridges had to be reshaped to provide the clearance required by the authorities managing the utilities.

The process of re-design took a period of 30 calendar days. Consequently, this delay resulted in the ultimate deviation of the completion dates. Project C was executed throughout the years 2008 until the end of 2011. The intended time of completion was July, 2011. However, due to the re-design process, ABC encountered excusable delays which lead to the alteration of the completion date to March, 2012. The Employer acknowledged the EOT claim tendered by ABC to grant an additional period of eight months for completion of works. However, there were no acceleration measures undertaken by the Contractor. In summary, the total of what the contractor actualized as being his right are seen in the simple formula below:

$$\text{Total} = \text{Contract Value} + \text{Prolongation Costs} + \text{Cost of Additional works}$$

The personnel who were interviewed in project C are JK and PM, whose combined feedback was used to support the findings in the analysis of project C.

5.5.1 Analysis-Case 3 – Interviewee 1

JK is a 63 year old male civil engineer, who is an Italian national. He has been working for ABC for over 30 years in their projects in Europe and the Middle East. JK holds the designation of project director for project C. His input was very vital for the claim presented by ABC, since he contributed many of the vital facts and incidents to the claim. JK does not hold any certificates in project management but is very well known for his achievements in ABC.

When JK was asked to define a claim in his own words, he said *“I see a claim as a way to intimidate the other party and a way to waive any attempts for penalties”*. The various claims JK has handled throughout the years of work in construction projects were prolongation, acceleration and EOT claims. JK noted that the claims present in project C were EOT and prolongation only. He acknowledged that no acceleration measures were taken to speed up the works since the Employer had not consented to the concept of acceleration measures. JK denied that the claims were used to cover any kind of delays due to the Contractor’s fault. On the contrary, JK says *“We did not encounter any concurrency despite what the Engineer or the Employer says. Hence, all delays are accountable for by the Employer”*.

JK asserted that the team he usually relied on in project C was the contract manager and the 3rd party specialist. JK said *“Actually we had two consultants to evaluate the value of claim”*. JK elaborated that *“sometimes it is better to have a specialist in claims for the submission and presentation of our claim”*. According to his point of view, a successful claims management system should include people with good negotiation skills. They should be people who are also experienced in contractual matters and have good planning skills. JK added, *“For the presentation of a claim, I truly believe that the person who is going to present should have previous experience in handling claims”*.

JK admitted to some mistakes he saw serious in the project. He contended that these mistakes included poor site management, with the site team accepting changes free of charge, out of intimidation by the Engineer. JK said *“The cost may not be as important in such situation as much as proving sources of delays and parties*

responsible for these delays". JK further stated that the lessons he learnt from project C were not to accept the indemnity of design by submitting proposals. He elaborated, *"The Engineer has requested us to submit design, stating that it is our obligation to do so. I must admit that I accepted initially out of good intentions. However, in future I will not accept to have my team designing on behalf of the Engineer because that only covers delays resulting of design errors"*.

On claims substantiation, JK stressed on the fact that well written contractual letters during the construction phases were of great importance. He jokingly added *"A letter a day keeps the Engineer away!!!"* JK felt that recording facts is compulsory for the proper substantiation of claims. Once the claim is fully substantiated, he explained, *"I along with my contract manager usually do the presentation; sometimes we seek the assistance of the higher level management in order to attract the care of the Employer to the seriousness of the claim"*.

JK discovered that the Engineer was helpless where the claims were concerned. He added, *"I don't blame the Engineer. After all, he overpowered by the Employer."* JK greatly felt that Engineers did not act impartially due to the pressures exercised by the Employer. He expressed his frustration on the way the Engineer had underestimated the claim submitted by ABC, by simply changing facts and denying instructions made directly at site. On FIDIC, JK said that FIDIC had been the form of contract used in all his projects in the Arab world, and that he was comfortable working under a FIDIC contract.

On the records keeping issues in the project, JK did not reveal any discontent with the system they followed. He stated that the documents he needed were simply available in soft copy on the IT server. However, he noted that certain documents were not available due to privacy issues and those were the claim submissions, addendums, etc.

The last area of discussion with JK was the change and change management issues. JK found that changes during construction have more significant impacts, since they take place during the hustle of trying to cope with the tight schedules. He also

affirmed that cost and change have a proportional relationship, whereas change and time have an inversely proportional relationship. JK attributed the occurrence of change to incomplete design and lack of clarity of the Employer's objectives. JK emphatically linked claims to changes by saying "*Changes are the number one cause of claims and are at a few times a bonus to us*". He believed that change orders had helped a lot in adjusting the project's turnover, especially since the rates in this re-measurable contract were low.

JK concluded on the disputes which had occurred and attributed them to the non-acceptance of the Employer to the contractor's claim. He said that towards the middle of the project, he could sense isolation and alienation as there were fewer interactions with the Engineer and the Employer. However, he ended the interview by affirming that claims in the past had caused tension and stress amongst all the concerned parties. In the case of project C, the only advantage JK perceived was the additional time granted under EOT to complete the project.

5.5.2 Analysis-Case 3- Interviewee 2

The second interview held in project C was with PM who is a 37 year old contract manager. PM is an Australian citizen and has been working for ABC for 2 years only. He has six years of experience in managing contracts. During his tenure in ABC, PM was the member who assisted in writing the claim, along with JK and the project director. PM is considered by ABC as the claims professional since he has undertaken many courses on claims substantiation.

PM defined a claim as *“a formalization of the contractor’s rights for time and cost due to circumstances not controlled by the Contractor”*. He has experienced all kinds of claims in the past and acknowledged the presence of EOT and prolongation claims in project C. PM admitted that on certain occasions, the contractor used tools to cover failures, but in the case of project C, he felt that the majority of delays were as a direct result of changes and incomplete design. PM defined the team which is indispensable in the management of claims and who are key personnel in formulation of claims as people who combine good technical backgrounds with good managerial skills. These people according to him are the project director, construction manager and the planner. In addition to these members, PM identified the significant role claims consultants play. PM said *“Claims consultants have become an essence in claims formulation for the contractor and are no longer considered as a luxury”*.

The interviewee went on to say that they had made errors in project C and encountered delays in the claim formulation. He attributed this to the lack of periodic meetings to identify the problem and to get feedback from all the members who were directly involved, whether at the managerial level or the site level. On the other hand, PM asserted, the claim presentation was successful since the presenters were skilled and professional individuals.

PM further contributed his views on claims substantiation by saying that a well-structured claim is the one that comprises all the necessary ingredients that touch at the core of the topic by being convincing to the Employer. PM did not see the Engineer as playing the role he was intended to play. He even asserted that Engineers do not act impartially as required by the contract. In other words, the judgment of the Claims Management and Substantiation in the United Arab Emirates Construction Sector

Engineer is thus found null by PM. Notwithstanding the fact that PM expressed satisfaction with FIDIC, he suggested that certain refinements could be made which would be more fair to the Contractor. An example PM gave was the authority of the Engineer to issue change orders without consideration to time. PM feels that such clauses which give an unlimited blanket to the Engineer should be amended to allow for the Contractor to give feedback on the impact of change prior to engagement.

PM continued to emphasize on the need to have proper records systems and databases which could be easily accessible. He said that *“It should be easy to find a sophisticated yet a simple way of obtaining records and protecting them from loss. We do have all the letters, notices and claim documents in electronic format. However, they need to be sorted out orderly for anyone in need to fetch them out quickly”*.

Interviewee 2 linked change to increase in cost of the project. He further noted that the changes made in the execution stages were more influential than the ones at initiation since the control over change lessens due to the fast track and attempts by the Contractor to complete by the given deadlines. Consequently, PM found that changes are a number one driver for claims since they contribute to the occurrence of abortive works, additional works and re-work. Nevertheless, the costs which get escalated were seen as an advantage for the Contractor to compensate any losses in profit, by presenting a claim for additional costs and overheads.

Finally, PM commented on the isolation the Contractor was put in project C. He agreed that the claim was indeed the source of isolation and dispute with the Employer. The Engineer, too, was not very helpful and perceived by PM as a stagnant body with no power other than the supervision of the works and the quality of works only.

5.5.3 Identified Similarities and Differences

In Project C, JK and PM expressed their full understanding of claims and the various types of claims they had witnessed in the project. Their experience also reflected their general knowledge on the issues of contractors' claims. On the elements of claims management, both JK and PM agreed on the majority of the elements. Both candidates concluded that dependency exists on commercial and 3rd party specialists while formulating claims. Conversely, the interviewees did not agree on two aspects, namely, the accessibility of important documents in a timely manner and timely notifications to the occurrence of delays. JK saw these aspects as crucial in claims management. However, PM did not mention them as being essential. Another difference noticed was with regard the usage of claims to cover delays. PM's view was that claims are used by contractors to cover delays. SH disagreed by asserting that there were no delays by the contractor.

JK and PM unanimously agreed that FIDIC is a suitable form of contract. They found no flaws in FIDIC as the form used but they showed disappointment in the role the Engineer had played in project C. Both contended, as the other interviewees had done earlier, that Engineers do not assess claims as they were supposed to. Furthermore, they perceive the Engineer to be biased and not acting impartially in administering the contract. They did not have high expectations of the Engineer's resolutions, since they solidly believed that the Engineer had not exhibited impartiality in judgment.

JK attributes the occurrence of changes in the project to the lack of clarity on the objectives of the project by the Employer and to poor design. On the other hand, PM sees fast tracking as the main driver for change. With respect to the period in which change is more effective, both interviewees agreed that changes were more influential at the execution stages. JK and PM also agree that changes in projects were seen as beneficial and were directly linked to claims occurrence.

5.6 Cross Case Analysis

Upon completion of all the interviews with all six interviewees in the three projects, it becomes necessary to conduct a cross case analysis. The cross case analysis is then the next essential step since the attention on the assertions common to most or all of the cases is what case researchers seek (Stake,2010). From the cross analysis certain commonalties and differences can be derived. These can then be compared to the literature conducted in chapter 2 and checked in the context of the conceptual framework developed for this dissertation in chapter 3.

5.6.1 Identified Similarities

The case study analysis and the cross case analysis have conceived a group of similarities shared among all interviewees. One of the first aspects of commonality among the six interviewees is that all the interviewees are construction professionals who have worked in projects in the UAE and abroad. All candidates expressed their familiarity with claims and the various claims they encountered in their previous projects.

The three projects had one or more claims specialists to assist in evaluating, formulating and presenting ABC's claims. All the interviewees stressed the fact that it is important to have an experienced specialist to help consolidate the claim. Additionally, the majority of them expressed that the commercial, planners and project team are key personnel involved in the claims management process.

The six interviewees expressed their awareness of the necessary documents relevant for the claims formulation. The three projects included document control systems, and records were kept regardless of the interviewees' agreement on the appropriateness of these systems or their workability in relation to claims management.

The interviewees unanimously agreed that the role of the Engineer in assessment of the contract and the claim was the least of their concerns. The Engineer, as they pointed out, is either powerless or biased in the favour of the Employer. In both situations, they sincerely believed that the Engineer acted only on the supervision of the works and was directed by the Employer to serve the latter's interests. There

was a lack of fairness and integrity in the assessment of their claims, according to all the interviewees, since the claims have not been settled or agreed upon to date with the respective Employers.

The use of FIDIC as a form of contract was found suitable by all the interviewees. However, their consent was conditional inasmuch the application of FIDIC was fairly observed to serve all the contract parties rather than to serve the exclusive interests of the Employer.

On the issue of change and change management, all the interviewees attributed the increase in project costs to the occurrence of change. They further agreed on the fact that changes during implementation have more substantial impacts on the overall project than changes that occur during the initiation phases of a project. The majority of the candidates attributed the occurrence of change to the poor or incomplete design provided by the Architect. However, the existence of change in construction projects was also found by the interviewees as beneficial and a source of increased turnover for the Contractor.

5.6.2 Identified Differences

The differences identified at the cross case analysis level were found to be few. The first identified difference was that only half of the interviewees found that delay analysis is an integral part of claims substantiation. Three of the interviewees considered the occurrence of changes to be influential at the initiation stage of a project only, while others found it to be influential during execution or at both stages. Another difference realized in the analysis was the lessons learnt section where each of the interviewees contributed to different lessons learnt, as can be seen in table 5-9.

Furthermore, tables 5-5 through 5-8 summarize the responses of all interviewees in projects A, B and C clearly. The tables were developed from the relevant questions raised during each interview.

5.7 Chapter Summary

This section represents the results and findings concluded after the data analysis and the cross case analysis are compared to the literature and the critical success and critical failure identified in earlier chapters. These are summarized in tables 5-10 and 5-11 respectively. In table 5-10, it is evident that the critical success factors (1), (2), (5), (6), (7) and (8), as identified in chapter 3, were in accordance with the literary findings and interviews outcomes. On the other hand, the researcher believes that critical success factors (3) and (4) were not emphasized in the literature or the interviews, despite being key success factors in the conceptual framework. Therefore, they may be included as part of the recommendations for claims management systems.

Conversely, the researcher had highlighted certain critical failure factors demonstrated in table 5-11. These, along with the supporting literature, reflect the importance of awareness of failure factors in managing claims by Contractors. Hence, they are emphasized in chapter 6 as part of the conclusions. Critical failure factors (2) and (3) relate to strategy and team weaknesses, both of which were not reviewed adequately in the literature or in the interview structure. The researcher feels that the lack of a clear strategy and team weakness are contributors to failure of claims management, resulting in unsuccessful claims and loss of the Contractor's entitlements.

To conclude this study, the researcher opts to include strategy and team awareness in chapter 6 as identified factors of strength for any claims management systems. However, these findings and assumptions will be applicable only to projects in the United Arab Emirates and are not to be globalized.

	Identified Claims Management Elements (Virtues and Deficiencies)	Project A		Project B		Project C	
		Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2
1-	Awareness to claims as a concept	√	√	√	√	√	√
2-	General understanding of the various types of claims	√	√	√	√	√	√
3-	Familiarity with FIDIC as a form of contract in construction projects	√	√	√	√	√	√
4-	Involvement in the construction claims arising in projects	√	√	√	√	√	√
5-	Usage of claims to cover delays caused by the contractor	√	X	√	X	X	X
6-	Understanding of the claims in each project	√	√	√	√	√	√
7-	Dependency on the Project Manager for claims formulation	√	√	√	√	√	√
8-	Dependency on the Planning engineer for claims formulation	√	√	√	√	X	√
9-	Dependency on the Commercial manager for claims formulation	√	√	√	√	√	√
10-	Dependency on 3rd party claims specialists for claims formulation	√	√	√	√	√	√
11-	Timely notifications to delays occurrence	√	X	√	X	X	√
12-	Suitability of FIDIC as form of contract to be used in UAE	X	√	√	√	√	√
13-	Accessibility of important documents in a timely manner	X	√	√	X	X	X
14-	Understanding of a successful Claims management system	X	√	√	√	√	√
15-	Admittance to occurrence of errors and mistakes in claims	√	√	√	√	√	√
16-	Proper presentation of the claim	X	√	√	√	√	√
17-	Delay analysis an integral part of claims substantiation	√	√	√	X	X	X
18-	Proper register of events during construction	√	X	√	X	X	X
19-	Presence of disputes, alienation and hostility	X	√	X	X	√	√

Table 5-5: Summary of Claims Management Elements

	Role of the Engineer and FIDIC	Project A		Project B		Project C	
		Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2
1-	The significance of the Engineer in administering of the contract	X	X	X	X	X	X
2-	The significance of the Engineer in the Claim assessment	X	X	X	X	X	X
3-	The Impartial role played by the Engineer	X	X	X	X	X	X
4-	Fairness and Integrity practices of the Engineer	X	X	X	X	X	X

Table 5-6: The Role of the Engineer and FIDIC

	Record Keeping	Project A		Project B		Project C	
		Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2
1-	Awareness of the key documents needed for claims formulation	√	√	√	√	√	√
2-	Availability of a document control system	√	√	√	√	√	√
3-	Accessibility of important documents in a timely manner	X	√	√	X	√	X
4-	Awareness of the official notifications and recording of events	√	X	√	√	X	√

Table 5-7: The Aspects of Record Keeping

	Identified Change and Change Management Elements	Project A		Project B		Project C	
		Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2	Interviewee 1	Interviewee 2
1-	Awareness of the Impact of Change on the project costs	√	√	√	√	√	√
2-	Changes of significance occur pre-implementation	X	X	√	√	X	X
3-	Changes of significance occur during execution	√	√	√	√	√	√
4-	Change of design is one of the causes of change	√	√	√	√	√	X
5-	Lack of clarity is one of the causes of change	√	X	X	√	√	X
6-	Fast tracking is one of the causes of change	X	√	X	X	X	√
7-	Claims are directly linked to changes	√	√	√	√	√	√
8-	Change is beneficial to the Contractor	√	√	√	√	√	√

Table 5-8: Identified Change and Change Management Elements

	Project	Interviewee	Summary of lessons learnt
1-	Project A	JR	<ul style="list-style-type: none"> - Importance of formal notifications - Recording the impacts of changes and delays in written
2-	Project A	GH	<ul style="list-style-type: none"> - Importance of proper substantiation
3-	Project B	SH	<ul style="list-style-type: none"> - Frequent meetings and open channels of communication are an essence of claims management
4-	Project B	GV	
5-	Project C	JK	<ul style="list-style-type: none"> - Non acceptance of change without formal notification
6-	Project C	PM	<ul style="list-style-type: none"> - Importance of periodic meetings to review the claim status

Table 5-9: Summary of Lessons Learnt

	Identified Elements by Interviewees	Author	Corresponding CSF	Reference
1-	Dependency of claims occurrence of change at the initial stages of a project	Arditi, D. and Patel, B. (1989). Expert system for claim management in construction projects. <i>Butterworth & Co (Publishers) Ltd</i> Vol. 7 No 3.	Project Initiation Phase	CSF1
2-	A majority of agreement on the importance of maintaining records	Jergeas, G., PE and Hartman, F. (1994). Contractors' Protection Against Construction Claims. AACE International Transactions ABI/INFORM Global pg. DCL 8.1.	Project Documentation and Record Keeping	CSF2
3-	No clear role displayed on assigning tasks to team members	-	Team Members Role Identification & Awareness	CSF3
4-	No clear identification	-	Monitoring the Work Program	CSF4
5-	Part of lessons learnt by the interviewees demonstrated in table 5-9. Unanimous agreement on the linkage of claims to changes and change orders by the interviewees	Han, S., Love, P. and Feniosky, P. (2011). A system dynamics model for assessing the impacts of design errors in construction projects. <i>Mathematical and Computer Modelling</i> .	Changes and Change Orders	CSF5
6-	Identified by few interviewees as significant	Bunni, N. (2005). The FIDIC Forms of Contract 3 rd Edition. Blackwell Publishing Ltd.	Timeliness of Notification	CSF6

7-	Agreement on the formulation of a claim importance as part of	Keane, P. J. and Caletka, A. F. (2008). Delay Analysis in Construction Contracts. A John Wiley & Sons, Ltd., Publication.	The formulation of the claim	CSF7
8-	No clear reference to strategy by the respondents	Grundy, T. and Brown, L. (2002). Strategic Project Management Creating Organizational Breakthroughs. Published by Thomson Learning, Berkshire House.	Strategic Project Management	CSF8

Table 5-10: Critical Success Factors versus Literature versus Interviewees Feedback

	Identified Elements by Interviewees	Author	Corresponding CFF	Reference
1-	Admittance to the importance of changes and change orders	(Molly, K. (2007). Six Steps for Successful Change Order Management. <i>Cost Engineering</i> , Vol. 49 No. 4	Ignorance of Change and Change orders	CFF1
2-	No reference on the cruciality of lack of strategy	-	Lack of Strategy	CFF2
3-	No implication to team weakness but to team awareness to the non-acceptance of gold plating, scope creep and immediate need for reporting	-	Team Weakness	CFF3

4-	Agreement on the role of planning	Winch, G. and Kelsey, J. (2005). What do construction projects planners do. <i>International Journal of Project Management</i> 23 pp. 141–149.	Poor Project Planning	CFF4
5-	No detection of concurrency by majority of the interviewees	Rider, R. and Long, R. (2009). Analysis of Concurrent /Pacing delay. Published by Long International Inc.	Concurrency of Delays	CFF5
6-	Gold plating and Scope Creep	Project Management Institute (2008). A guide to the project management body of knowledge (PMBOK Guide) – Fourth Edition. Newtown Square: PA: Author.	Gold Plating and scope creep	CFF6
7-	Consentient agreement by the interviewees on biased Engineers	Bunni, N. (2005). The FIDIC Forms of Contract 3 rd Edition. Blackwell Publishing Ltd.	A Biased Engineer	CFF7
8-	Improper formulation of claims results in rejection of the claim as asserted by a few of the interviewees	Gibson, R. (2008). Construction Delays Extensions of time and prolongation claims. Published by Taylor & Francis Group.	Improper claim formulation	CFF8

Table 5-11: Critical Failure Factors versus Literature versus Interviewees Feedback

CHAPTER SIX– CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Yin (2011, p.220) states that “the preferred logic is that the conclusion(s) be connected both to the preceding interpretive phase and to a study’s main data or empirical findings”. One of the key criteria of any research success will be whether a set of clear conclusions drawn from the data collected exist (Saunders et al. 2009, p.32).

Likewise, the conclusions for this research have been deduced after the analysis of the three cases represented in the projects executed by ABC Construction Company. Furthermore, the data and documents obtained from ABC document control system performed as secondary sources of data which helped draw the following conclusions:

- 1- There is a lack of consideration given to the importance of proper record keeping and documents management, which in many instances, leads to loss of valuable information and therefore, to the loss of entitlements of the contractor.
- 2- Change is not managed in the appropriate manner which contributes to loss of rights, scope creep and improper record.
- 3- If well managed, change can be beneficial to the Contractor in his claim by recording them and accepting written changes only by the party which has power to issue them under the contract.
- 4- An existence of high dependency on 3rd party specialists for claims management and substantiation. This is attributed to the fact that specialists have more experience than other practitioners in preparing and negotiating claims.
- 5- Engineers, on most occasions, in the three projects were not acting impartially as specified by the contract, resulting in alienation, hostility and disputes.
- 6- Lack of proper substantiation of claims can result in high expenditure through deputing 3rd party consultants in claims and delay in the processing of the claims of the Contractor.

- 7- Project managers are often not fully aware of the procedures needed to develop claims. This may be attributed to the fact that few of project management professionals attend trainings on claim handling process and management.
- 8- Lack of awareness tends to spread and is manifest among other team members within the Contractor's organization. This greatly contributes to forming states of ambiguity and loss of sense of direction.
- 9- FIDIC is identified as the known form of contract used in the United Arab Emirates to formulate construction contracts between Employers and Contractors.
- 10- Non settlement of claims in an amicable manner leads the parties in most cases to resort to dispute resolution mechanisms such as arbitration or litigation.

6.2 Recommendations

Recommendations are practical suggestions that must be made feasible and not "blue sky" ideas (Greener, 2008). The recommendations set out for this research have been derived in a manner which makes them feasible, tangible and can be acquired as steps and procedures project managers and construction claims practitioners may follow in order to manage and substantiate their claims. Furthermore, this study was conducted in the United Arab Emirates and the recommendations maybe generalized to an extent to construction projects within the same industry in the UAE:

- 1- The need to establish a proper record management system, which acts as a backup to the document controller, who on his part may retrieve documents easily and whenever needed.
- 2- Early and formal notifications of delays to the Engineer and Employer are necessary since contract forms call for the necessity of timely notifications.
- 3- The level of awareness of the effects of changes and especially of unreported or unrecorded changes needs to be increased. This can be done by implementing management of change and identifying risks that may be associated with all types of changes.

- 4- Establishment of enhanced planning by allowing for consolidated and influential planning departments which act as advisors to the Project Manager and perform as a source of alert in the event of delays caused by the Employer or Engineer.
- 5- Continuous monitoring of the baseline program to ensure that no delay is caused by the contractor. By neglecting this, concurrent delays may surface and result in the loss of additional costs for excusable delays.
- 6- The Contractor's Project Manager has to establish a strategy on how claims need to be handled once they arise. This can be achieved by involving key personnel in the project in the process of Claim Handling Processes as well as continuous reporting to senior corporate management.
- 7- Refutation of scope creep (PMI, 2008) and gold plating in construction projects as they do not allow for time and cost impacts and thus may result in loss of right.
- 8- Top management support to the project manager is greatly needed to further assist to maintain his project in the right direction.
- 9- Avoidance of alienation, disputes and sources of reciprocal hatred with the Engineer and the Employer are found to be necessary in claims management. This can be achieved by keeping channels of communication and negotiation open at all times.

6.3 Limitations of the Study

The research was generalized as it was based on three projects only and was based on case study approach. Better results would have been achieved if the sample targeted had been larger. Another limitation is the one identified by Kothari (2004) as being the danger of false generalization which is always there in light of the fact that no standard rules were followed in the collection of the data and only few cases were examined. However this research was based on three case studies and conclusions can be applied to the same cases or similar case in situation.

Furthermore, the research encapsulated the process of claims management and substantiation from a managerial approach. It would be recommended to complement

such a research with a construction law view by going further into the concepts of dispute resolution and mechanisms to resolve disputes resulting from claims.

Geographic constraint is considered as another limitation. The research was limited to the United Arab Emirates construction market only. It would have been better enhanced had it covered the Middle East and other GCC countries in a broader context.

6.4 Recommendations for Future Research

It would be recommended for future researchers to approach the topic of claims and claims management from a two way approach rather than a single approach. The first would be the contractual point of view and the other a managerial approach. This hybrid approach would be useful along with the use of the quantitative method to gather data relevant to the field by holding surveys involving all the stakeholders.

Another aspect which could be considered by researchers is to conduct this study from a multi-aspect dimension. In other words, the research can be conducted to include the perspectives of Employers and Engineers, in addition to the Contractor's perspective.

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APPENDICES

APPENDIX (A): Student Declaration Form

APPENDIX (B): THE INTERVIEW QUESTIONS STRUCTURE

General Information Questions

1- Gender

Male Female

2- Overall years of experience in the construction industry.

0 to 5 years 6 to 10 years 11 to 15 years 15 years and above

3- Total years of experience in UAE based construction projects.

0 to 5 years 6 to 10 years 11 to 15 years 15 years and above

4- Are you a holder of any international certificate(s) related to project management?

5- What is the nature of the project you worked on?

6- Please specify your designation during your work in this project?

7- What is the international body used to administer the contract between the Employer and your firm in this specific project?

8- Do you have direct involvement with the claims arising in your project?

Claims Management Questions

1- If you were to define a claim, what would be the most appropriate definition you would put in words?

2- What are the various types of claims you have encountered in the projects executed in UAE?

3- Have you ever attended any seminars or training sessions related to claims and management of claims?

4- In this particular project what are the type of claims presented to the Employer?

5- Were claims used in your project used to cover any kind of delay resulting of your organization's own delays?

6- For the formulation of claims, who are the team members usually relied on?

- 7- If you were to set the rules for construction claims management systems, what would you take into consideration?
- 8- Does your organization deal with claim specialists to assist in the formulation and evaluation of your claims worth before presenting to the Employer?
- 9- What are the common errors which you have encountered in the presentation of your company's claim?
- 10- What are the key factors to a successful claim presentation?
- 11- What are the lessons learnt from the current project?
- 12- What are the common mistakes your team or claims specialist usually fall into where claims are concerned?

Questions related to Claims Substantiation

- 1- What are the essential components required for the proper substantiation of a claim?
- 2- What is necessary to be done during the construction phases to make a claim sufficiently substantiated?
- 3- Who do you consider the key team members who can contribute to the case development and consequently successful claim presentation?

Questions Related to the Role of the Engineer and FIDIC

- 1- What is the role of the Engineer where claims are concerned?
- 2- Do you feel that the Engineer acts impartially with your demands as a Contractor?
- 3- During the Engineer's assessment of your claim, Is the Engineer practicing fairness and integrity towards your entitlement?
- 4- Do you feel that FIDIC which is currently adopted in the UAE the suitable form of contracts from a Contractor's perspective?

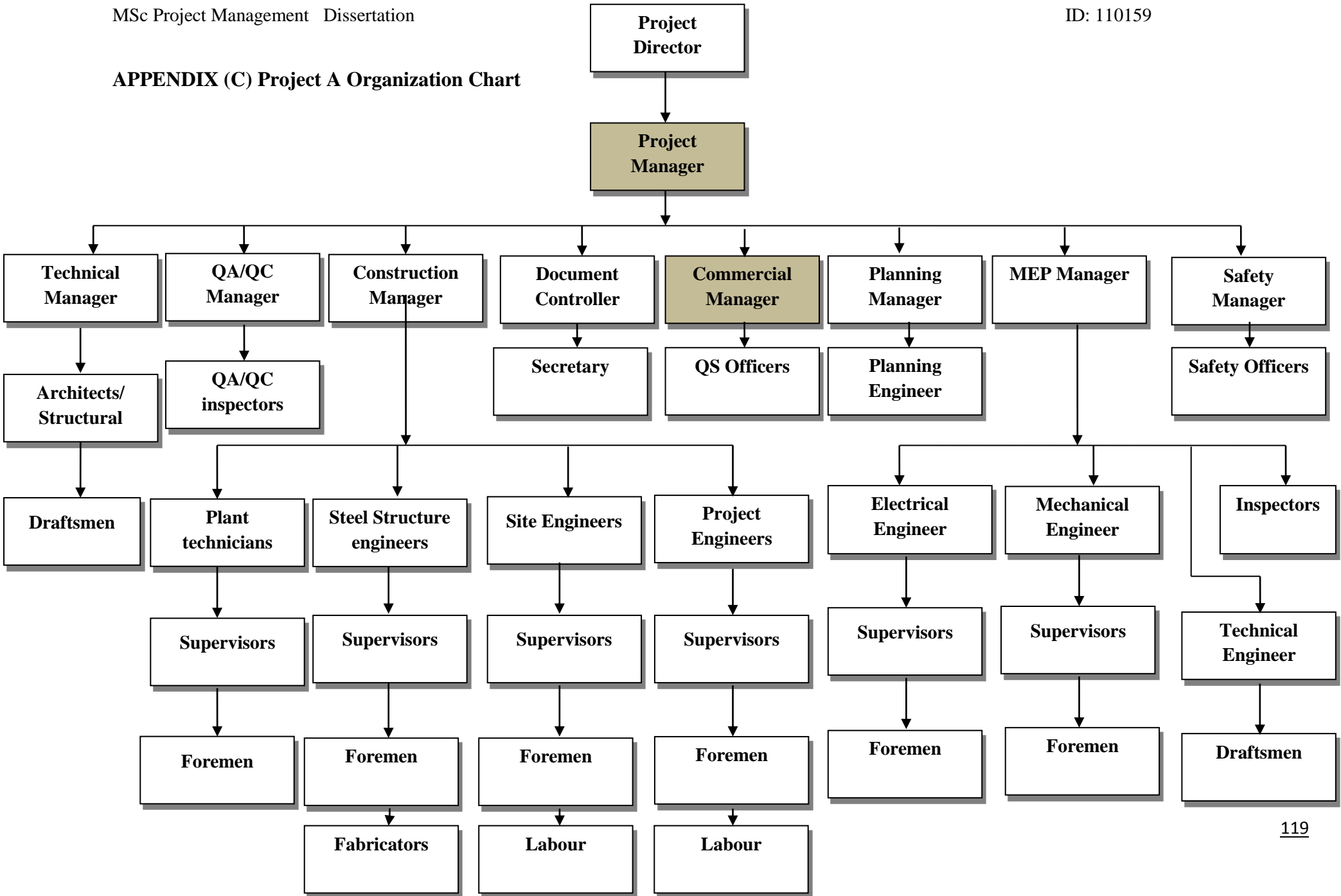
Record Keeping Questions

- 1- Whilst formulating the claim, what are the general documents you rely on to properly furnish the claim?
- 2- Do you have a document control system implemented to document all incoming and outgoing correspondence in the project?
- 3- Did you ever feel that there are setbacks for the system your organization is implementing with regards to controlling the documents?
- 4- Do you find documents easily accessible when needed especially when these documents are related to claims?
- 5- What are the most important documents needed for the proper substantiation of claims?

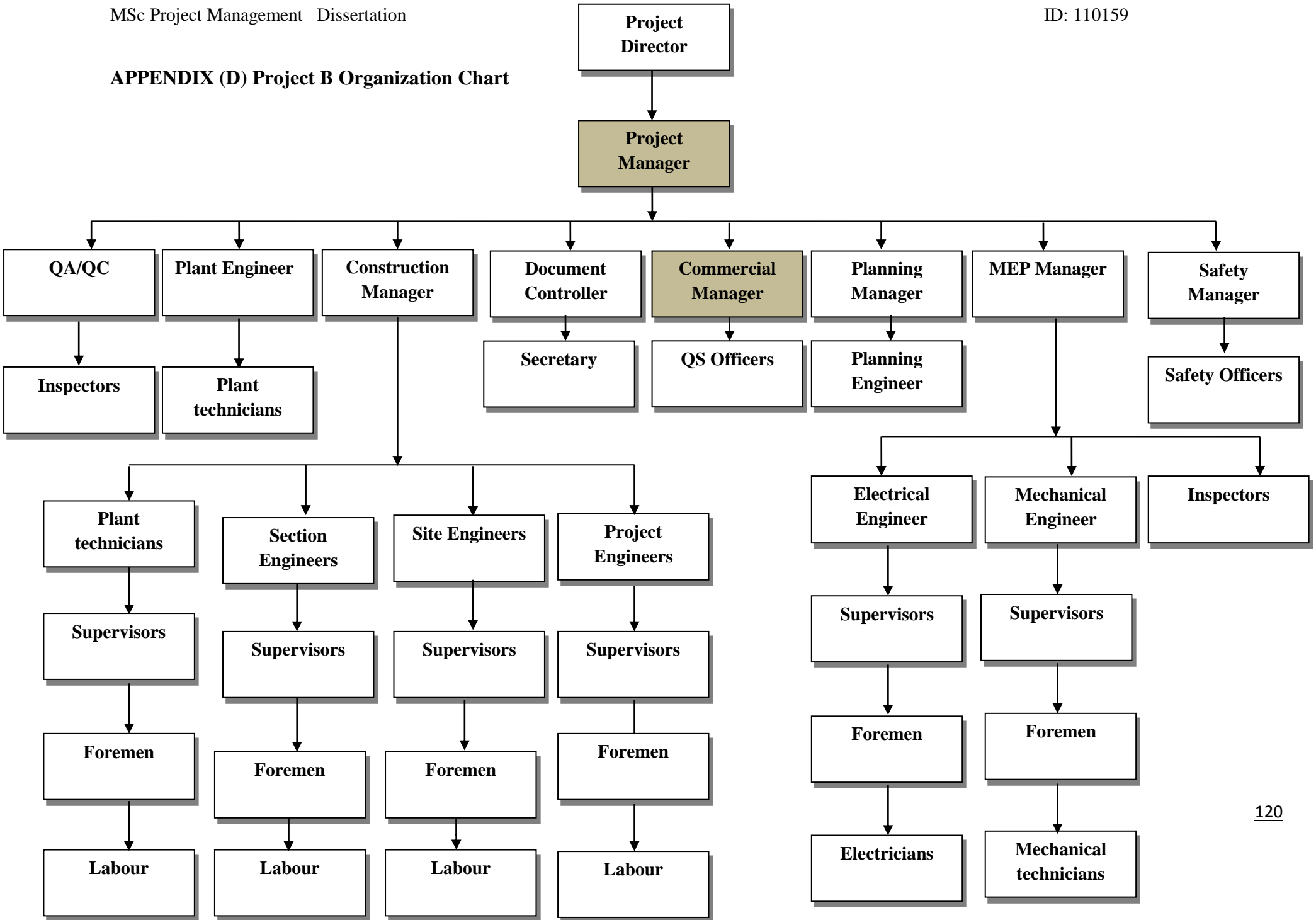
Change and Change Management Questions

- 1- From your opinion to what extent do changes impact the costs borne by the Employer and the contractor?
- 2- Which changes have more impact on projects delivery, the ones identified at the initial stages of the ones during the implementation stages?
- 3- What are the main drivers for change occurrence?
- 4- As a construction professional how do you link the occurrence of change to the formulation of a claim?
- 5- Do you feel that changes are always initiated by the Employer or the Engineer?
- 6- How did the project benefit/suffer of change and variation orders?
- 7- Did the claims in your project result in disputes, hostility or disagreement with the Client?

APPENDIX (C) Project A Organization Chart



APPENDIX (D) Project B Organization Chart



APPENDIX (E) Project C Organization Chart

