



**ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE**

**“ASSESSMENT OF CLAIM AND ITS IMPACT IN BUILDING
CONSTRUCTION PROJECTS IN ADDIS ABABA: THE CASE OF
SELECTED GRADE 1 CONTRACTORS”**

By: Emnet Kefyalew

Advisor: Bahran Asrat (PhD)

JUNE 2022

ADDIS ABABA, ETHIOPIA

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**A RESEARCH PROJECT WORK SUBMITTED TO SCHOOL OF COMMERCE IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
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JUNE 2022

DECLARATION

I, the undersigned, hereby declare that this project work entitled **“Assessment of claim and its impact in building construction projects in Addis Ababa: in selected grade 1 contractors”** is my original work with the guidance of the research advisor and all sources of materials used for the project work have been acknowledged as complete reference. I further confirm that the study has not been submitted in full or partial fulfillment in any other recognized University/Institution for the purpose of earning any degree.

Signature

Date

Emnet Kefyalew

STATEMENT OF CERTIFICATE

This is to certify that Emnet Kefyalew has completed her project work entitled "**Assessment of claim and its impact in building construction projects in Addis Ababa: in selected grade 1 contractors**". In my opinion, her project is appropriate to be submitted as a partial fulfillment of the requirements for the award of Degree in Masters of Project Management.

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**ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE
DEPARTEMENT OF PROJECT MANAGEMENT**

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Abstract

The primary purpose of this study was to analyse claim in construction its cause and the effect it has on building construction by assessing three Grade one contractors, namely Elmi Olindo Contractors PLC, Rama Construction and Bamacon Engineering, which have been in the industry for more than a decade. The specific objective of the study was to find the feasibility of the procedure, if the procedure is being used properly and if there were any issues that are arising with this procedure. The scope of the study has been limited to the projects taking place in the 3 companies specifically in Addis Ababa. The study's research design is descriptive and used both qualitative and quantitative. The sample size the study was done on is Eighty seven (87). The sampling technique used is a purposive sampling. The survey questionnaire and interview is prepared based on literatures reviewed to asses claim and its management. The study revealed that claim management requires knowledge and consciousness. Another finding was that claim resolution or handling took time. According to the mean and grand mean, the procedure of the claim management in the industry was available, applicable and feasible. Respondents demonstrated a high level of awareness. Also, the results of the questionnaire show that the procedures are being implemented, but not fully, as the time for claim response is taking longer than necessary and is not being resolved on a timely basis. However, according to the interviewees, even the procedures are not being followed, and there is still a lack of consciousness and awareness about claims and their management. The conclusion of the research is that awareness of claims and how aware companies are of them is low, and this needs to be addressed. Among the various causes of claim, it was identified and agreed that the majority of claims are caused by unrealistic schedules in the planning stage, variation works, and time intensive claim resolution, resulting in financial and time extension claims. The recommendations from this study is that claims need to be identified at planning stage, awareness trainings need to be given to all the manpower that is directly handling the project works, Communication within parties throughout the project life cycle need to be worked on as it is a major key in prevention, Procurement strategies should be laid out.

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List of Abbreviation

PMBOK	Project Management Body of Knowledge
PMI	Project management Institute
GCC	General Condition of Contract
SCC	Specific Condition of Contract
FIDIC	Fédération Internationale Des Ingénieurs-Conseils
PPA	Public Procurement & Property Administration Agency

CHAPTER ONE

1. INTRODUCTION

Construction industry is a service providing and implementing industry where plans and specifications are converted into a finished product. In Ethiopia this industry plays a major role in the economy. The performance of the construction industry has effect in the economy and social impact.

Construction management is one of the critical and determinant factors in delivering goals construction projects. In the construction industry, major success factors (MSFs) are inputs to project management practice that can lead directly or indirectly to project success according to Belay, Tekeste & Ambo, (2017) it was also stated that, Ethiopia is one of the developing countries that is unable to meet its construction project objectives due to a failure to adhere to various key success factors. And accordingly the most significant success factors among the 68 identified major management success factors are decision making effectiveness, project delivery system, timely decision by owner/representative, owner's contractor's cash flow, project manager's leadership skills, and fund adequacy. (Belay, 2017) Claims are one of the factors that affect project success and appear to impede construction completion and cause delays in project delivery.

1.1. Background of the study

Construction is inherently unique in that no two projects are alike, despite the fact that the method is the same. Construction projects, by their very nature, are prone to hazards as well as claim concerns, no matter how thoroughly the contract documents are designed, and issues that are not expected may develop. This being said contract management and administration must be done efficiently and effectively throughout the project life cycle in any project. Even though that is the case Miraz, 2005 also stated that “ the Management Processes that requires prevention or mitigation of construction claims and the expeditious handling when they do occur, for earliest settlement can be viewed from two perspectives: the party making the claim and the one defending against it.” (Mirza, 2005) So claim handling is difficult as time goes by and not handled at its earliest.

And as we go deeper we can see the definition of claim. Claim in construction has been given definition from different authors. And the Project Management Body of Knowledge (PMBOK) has defined Claim in projects as “a request, demand or assertion rights by a contractor and client for consideration and compensation, or payment under the terms of a legally binding contract” (PMBOK Guide Project Management Institute, 2004)

Claim in construction is also defined by Marsh, 1992 as a “Demand for compensation in terms of money or time extension or other or a combination of these that a party rightly or wrongly believes he is entitled to.” (Marsh, 1992)

As defined by Miraz, 2005 claim in projects is, “A demand for something due or believed to be due, usually the result of an action or direction.” And it was also noted that claim in construction is “something that is usually additional compensation for work claimed to be extra to the contract or an extension of time for completion or both.” (Mirza, 2005)

Claims are frequently thought of in terms of the contractor making claims against the owner or another prime party, and subcontractors making claims against the contractor. However, claims can also come from the owner/prime party who believes that the contractor is failing to meet some contractual requirement.

1.2. Statement of the problem

The Ethiopian construction industry has a lot of obstacles its facing that hinders all the progress or even more making it a very tedious sector. The construction industry has evolved into a highly complex, high-risk, multiparty enterprise. As a result, it's logical that there's a lot of friction in the building sector. Unfortunately, while the symptoms are well-known, the core reasons and true costs of this struggle remain unknown. Also it is articulated that claims are affecting the industry. Contractual claims are integral and an important feature of construction project's life (Awad-Saad, (2017).)

In construction projects specifically in building constructions it's known that there are a lot of problems and amongst those is claim and its issues. “Claims that occur in construction are due to one party failing to carry out its responsibilities and obligations and in implementing the project, the agreement reached is stated in the contract document.” It's also known that frequent disagreements between the owner and the contractor, or the consultant was blamed. To minimize the problem, it is critical to understand the risks that may arise during the project and whether those risks are addressed in the contract articles (Rauzana, 2019)

Claims can have a variety of consequences, including payment delays, time extensions, and work suspension. Construction claims necessitate both legal and engineering skills. Construction claims result in demands for more time to complete a project, and this is still a problem that exists in every construction project. And as stated by Girmay Kahssay, 2003 “The increased frequency of claim cases in the construction sector of the Ethiopian construction industry is draining scarce resources in order to settle claim cases.” Recourses are very or maybe too valuable to Ethiopia as a developing country and these resources being drained will affect not only this sector but also every other sectors because they are intertwined. It was also stated that “unless a systematic approach of handling claim

cases is formulated and awareness created, this issue will continue to affect the proper handling of projects and may significantly affect future construction endeavors.” (Kassay, 2003)

In construction the major rule followed is based on the contract document and claim management and procedures must be followed accordingly. In a construction project, issues may arise that cannot be resolved among project participants. Such issues typically involve requests for additional money or time for work performed beyond the scope of the construction contract. Claim management as stated by Victor Z (2018) “is an indispensable process in today’s projects that involve many resources and parties.” And also that “one of the most effective claims management techniques is to avoid claims in the early phases of a project is eliminating the root causes of problems before they occur” (Young, 2018) Contractual claim is a common problem in building and civil engineering construction projects (Yadeta, 2014). Contractual claim on construction project has negative effects on projects such as delay, dissatisfaction and disputes that often lead to acrimonious relationship amongst stakeholders with attendant overruns both in cost and time of construction of projects.

Claims can be triggered by a variety of issues, including the owner's change in design and the delay in approving and submitting the design, as well as higher-than-normal rainfall conditions and land studies that are not in accordance with field conditions. (Rauzana, 2019) And accordingly the addition of work, implementation time, and pay is the result of presenting these claims.

1.3. Research questions

1. Is the claim management procedure that is available in the current industry feasible?
2. How efficiently is claim management Implemented in the current industry?
3. Is claim caused due to claim management issues?
4. Does the efficiency of the claim management procedure implementation have an effect in causation of claim?
5. What impacts are seen in the construction industry that arise related to claim and its management?
6. What issues or gaps are witnessed in the claim management?

1.4. Research objectives

1.4.1. General Objective

The main objective of this is to assess the causes of claim and its impact in building construction projects in Addis Ababa.

1.4.1. Specific Objective

1. To assess the feasibility of claim management procedure that is available in the current industry.
2. To assess how efficiently claim management is implemented in the current industry.

3. To assess claim caused due to claim management issues.
4. To assess how efficiency of the claim management procedure implementation have an effect in causation of claim.
5. To asses impacts seen in the construction industry that arise related to claim and its management.
6. To assess what issues or gaps are witnessed in the claim handling procedure.

1.5. Significance of the study

Construction industry is based on majorly on the 3 constraints, those being cost, quality and time as stated by the project management institute (PMI). These 3 constraints are what is need to be fulfilled for any project to be successful with all parties satisfied. Any deviation on the project from the one of the constraints will have more issues concerned with either one of the other constraints so in general the triangle's concept is that if a deadline for a specific stage is moved up, there will be effects on the other two sides to compensate for the constraints. As a result of the shorter timeline, the cost could be higher. Project managers must work within the triple constraints of project management. Claim affects the completion of time and extension of time also causes increase of cost of the project. That being said claim has a negative impact on projects and its management, especially here In Ethiopia, makes the problem even worse. Poor management of claim and the inadequate ways to prevent claim is affecting the industry and the economy of the country.

This research is of significance to the construction industry that is growing vastly to avert the different delays caused by claim and its management. It will raise awareness of the management and procedure of claim and its implementation. Secondly it will allow building contractors to focus on claim management principles that will in turn help them improve their claim management system.

The research can also be a ground for further studies. Similar research can be conducted by simply changing the scope from building to other construction mode as road, bridge etc.

Furthermore, the paper can also be used to compare construction practices among different cities in Ethiopia, as this study only focuses on building construction companies in Addis Ababa.

1.6. Scope of the study

The Concept of claim in construction projects is a very wide issue that it can't be delimited only to building projects of a company but beyond it. This research is delimited to building construction projects in grade 1 contractors in the industry and only on 3 of the building contractors have been considered. The scope of the work includes the analysis of causes of claim, their impact. Therefore, the study focused on collecting data only from the technical team members of the companies.

1.7. Limitations of the study

Claim is a vast problem in the construction industry and its cause and effect studied are on building construction amongst the various types of construction and this aspect does not only affect the building constructions but also other types of constructions like road, dam which were not included in this study. The other limitation of the study was that the sample size considered only 3 Grade 1 contractors and the number of grade 1 contractors' is vast and outcomes may vary amongst the various companies as well as different grades of contractors. That being said the study only focused on grade 1 contractors' and in grades that are lower the impact of claim would be of difference. Another limitation is time of doing this paper. This will affect the quality of information gathering.

1.8. Organization of the study

The paper will be organized in five chapters. The first chapter will be the introduction which will provide basic information about the research. It will include background of the study, statement of the problem, research question, objective of the study, significance of the study, research method, and scope of the study and the limitations of the study.

The second chapter will be the literature review from different sources which provide theories and discussions related to construction claim, its causes and effects.

The third chapter will be the methodologies to achieve research objective. It will show the Description of the study area, research design, approach population and sample, data collection instrument, method of analysis and presentation.

The fourth chapter presents the results which will include data analysis and interpretation obtained from questionnaire and interview.

The fifth chapter will be the conclusions and recommendations.

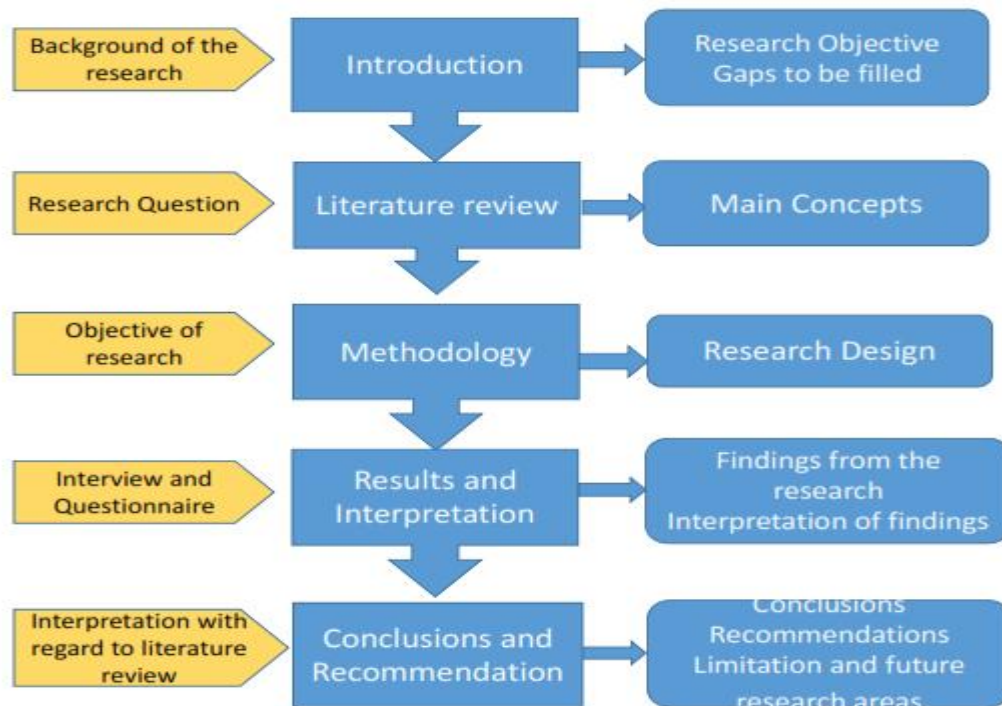


Figure 1-1 Framework of the study

1.9. Definition of key terms

Claim: - Request for compensation from either party to a contract, usually the Contractor, for losses caused by the other party's failure to fulfil his portion of the contract's responsibilities.

Contractor: - natural or juridical person under contract with a Public body/client to supply works

Engineer: - Representative of the Public Body/Client to supervise and inspect works and to test and examine the materials employed and the quality of workmanship, including any authorized representative of such person.

Party: - means the Public Body/client or the Contractor and includes their permitted successors and "Parties" means both of them.

Project management body of knowledge (PMBOK): - It is an entire set of best practices, terminologies, processes, and guidelines that are accepted as industry standards in the project management industry.

Project management Institute (PMI): - is a project management professional association. It has a global reach and aspires to provide resources for project managers all over the world to help them grow both personally and professionally.

CHAPTER TWO

2. LITERATURE REVIEW

This chapter discusses different published literatures in the area of construction management and claim management practices in construction.

2.1. Theoretical Literature Review

2.1.1. Claim and Claim management

Brief Overview of Claim and Claim Management

Claim and claim management has been defined by many authors over the years. In the FIDIC Manual it's stated as "A Claim is essentially a request from one party (usually the Contractor) for something which he considers is due to him under the terms of the Contract - and a Dispute arises when the other party disagrees with the Claimant either on fact or quantum, and the parties cannot reach an amicable solution."

Construction claim as defined also in FIDIC as "something in between the mere assertion for additional monies or for extension of Time for Completion and an actual entitlement to additional monies or for extension of Time for Completion."

However, the definitions for claim can be summarised as a request for compensation from either party to a contract, usually the Contractor, for losses caused by the other party's failure to fulfil his portion of the contract's responsibilities.

Construction Claim Management as defined by Arditi and Patel (1989), as "the process of dealing with or controlling the seeking of consideration or change by one of the parties involved in the construction process." (Arditi, 1989)

What is claim?

In past years, there has been much said regarding claim in that the term has broadened concept. The definition for claim is expressed in different ways. A construction claim is the administrative process in which to settle a financial or cost disagreement and sometimes involves the contractual time for completion. (PMI 2017)

David Arditi et Al, 1989 defined claim as "the seeking of consideration or change by one of the parties involved in the construction process." (Arditi, 1989)

In the context of construction industry, claims has been defined by Vincent P- Smith as, "a demand by a contractor for extension of time or for an extra payment of an item of work carried

out by him on behalf of the employer for which a readily identifiable amount cannot be ascertained under the term of contract.” (D, 1989)

Diekmann and Nelson, defined claims as “the seeking of consideration or change, or both, by one of the parties to a contract based on an implied or express contract provision.” (M.C., 1985) As said by Jergeas and Hartman “claim is the application by the contractor for payment that arise other than under the ordinary contract payment provisions.” (Jergeas, 1994)

In addition the general definition of claim, Abhishek Shah et al. noted that “in Construction Claim can be defined as a request by either party to the contract, usually the Contractor, for compensation for damages caused by failure of the other party to fulfil his part of obligations as specified in the contract.” (Abhishek Shah, December-2014)

Claim Management

Claim management as defined by Cox, 1997 as “a process that looks for and controls changes that might occur due to one of the parties involved.” As also stated by Hashem M. et al “A standardized delay claim management system should detect and document delays as soon as they happen and this requires a standardized process for owners and contractors with guidelines, limitations, and obligations” (Mohammed S. Hashem M. Mehany & Behzad Esmaeili, 2018)

Levin, 1998, stated that construction claim management is more than just one process but also possesses sub-processes and indicated seven basic procedures for claim and change order administration. 1) Recognition and identification of change, 2) Notification of change, 3) Systematic and accurate documentation of change 4) Analysis of time cost impacts of change 5) Pricing of change, 6) Negotiation of claim , and 7) Dispute resolution and settlement. (Levin, 1998)

Chaphalkar et al. (2015) defined Claim management as “the process in a system to bring the outcomes intended and that is best for all parties.” By the PMI Claim management is stated that “it contained of the following four processes: claim identification, claim quantification, claim prevention, and claim resolution.” (Project Management Institute, 2000) In the same study the author claimed that “If claims are considered as unforeseeable conditions and unknown risks, it can be said that if the parties are led to a dispute and can predict the outcome of the dispute with some certainty, then they are more likely to settle the matter out of court, thereby avoiding the exorbitant costs of going to court, not to mention the aggravation” (Chaphalkar, 2015). This shows the negative impact claim has on the parties involved.

Akeem et al, 2019 stated that “claims management seeks to forecast possible claims, identify claims that have already occurred, plan for preventive measures, and coordinate claims across the entire project among all stakeholders.” It was also stated that inconsistent construction claims management process can result in many disruptive effects. This may become a major source of contract disputes, which may lead to total abandonment of the project. (Akeem Adunfe Ajayi, 2019)

2.1.2. Claim management and Project Management

Project management has been defined by different authors. According to Kezner (2013) “project management is a series of planning organising, directing and controlling the organization resources to achieve the specific goals and objectives.” (Kerzner, 2013)

The PMI (Project management institute) defined project management as “an application that consists of knowledge, skills, tools and techniques and applies into series of project events to achieve the project requirement. The approach needs an appropriate application and the integrations of the project management processes.” (Project Management Institute, 2000)

It can also be defined as “the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, and quality and participation satisfaction.” (Barrie, 1984)

Project management in construction, as in any other project, has a major role in how the projects are executed and the outcome. As stated by Radujković & Sjekavica, (2017) “a successfully managed construction project is the one that meets the project objectives in a safe manner, within agreed time, cost and quality criteria”

Alias et al., (2014) also stated that “success factors in project management can be defined as those factors that determine the success or failure of a project management activity. They include components that should be brought together to guarantee a successful project delivery” and commonly seen problems that are found in project management in construction projects involve “poor planning, project execution and implementation inaccuracies, cost overruns and not meeting project schedule and quality thresholds”

As in the above statement regarding problems in project management, in order to get the intended results project management poor outcomes are great causes to claim. Agreeing to this Chen and Wang (2011) stated that “claim Management is an unavoidable process in Construction Project Management.” And also wrote that “Claims management is an important

content of project contract management and for the parties involved to reduce the loss to get the economic benefit of business strategy.” (Chen, (2011))

According to Kululanga et al. (2001) “the management of construction claims is the greatest challenge that is facing contractors in today’s vacillating business environment.” (Kululanga, (2001)) So to summarise project management as a whole is a way for claim management to be fully enforced and in a proper manner so as to minimise claims impacts from occurring. It’s a direct relationship where if there is poor project management then there is poor claim management also.

2.1.3. Claim in Construction Projects

Claim is an avoidable part of any project and in construction projects it’s also the same. In a study done in India the author stated that “before the contract is closed there are only few contracts in which there are no claims, negotiations and settlement occurs.” The author also stated that “However, financially strained Indian construction industry crisis are driven by unsettled claims such as 85% of claims raised are still pending and average settlement time is nearly 6 to 6.5 years.”

2.1.4. Cause of Construction Claim

A claim in the construction industry may be caused by one or a combination of several reasons. It may start with a simple reason. The effect of this claim may affect another situation. This may lead to a substantial set of interrelated complex claims. (Arditi, 1989)

According to different authors claim can be classified into different categories. As stated by Adrian, 1988, claims can be classified into four major types: delay claims, scope of work claims, acceleration claims and changing site conditions claims. (J., 1988)

Zaneldin, 2006, stated different types of claim in the study in Dubai and Abu Dhabi that claims in the UAE construction projects can be classified into six main types: contract ambiguity claims, delay claims, acceleration claims, changes claims, extra-work claims and different site condition claims. (Zaneldin, 2006)

There are different causes of claim in a construction project and by all the parties in the project. Claim can be happen for various reasons. As stated by Cheryl et al, 1994 “claim can be caused by acceleration of works, access to site, weather and increase of scope.” (Cheryl Semple, 1994)

As cited on a study by Arowoia et al, Liu, (2009) stated “during execution of the contract, sometimes claims arise due to the following; Insufficient use /changes in material, labour and

plant, Increases in costs of labour, materials, Ambiguity of contract document, Site running costs and Head office overheads. Also, we have Contractor financial problem, Loss of profit, Variation of work, Delay in completion of work, Site condition and insufficient plans and specifications. Lastly, Poor management and administration of the construction site, Conflicts between those involved in the construction of a project, Low price of contract due to high competition, Government regulations and accidents” (Arowoiya Victor Adetunji, 2019)

Arditi et al, 1989 also stated that, most typical claims are caused by factors like differing site conditions, change orders, delays, impact and ripple effects of delays, inspection problems, owner furnished items, difference in the interpretation of plans and specifications, unfulfilled duties, acceleration, inefficiency and disruption, unrealistic contract duration and cost. (Arditi, 1989)

Agreeing to the above study, Bu Bshait and Manzanera (1990) wrote typical construction claims against owners are caused by a lot of reasons such as poor project planning, scope changes, constructive variation orders, errors and omissions, contract accelerations and expediting. (Manzanera, 1990)

The following are some of the most common types of claims that the contractor and client are entitled to base on FIDIC stated on Figure 1 and Figure 2 respectively.

Table of contractor's claims under FIDIC CONS

Clause in FIDIC CONS 20.1	Contractor's claims
1.9	Delayed drawings or instructions
2.1	Right of access to the site
4.7	Setting out
4.12	Unforeseeable physical conditions
4.24	Fossils
7.4	Testing
8.4	Extension of time for completion
8.5	Delays caused by authorities
8.9	Consequences of suspension
10.2	Taking over of parts of the works
10.3	Interference with tests on completion
11.8	Contractor to search
12	Measurement and evaluation
12.4	Omissions
13.2	Value engineering
13.3	Variation procedure
13.7	Adjustments for changes in legislation
14.4	Schedule of payments
14.8	Delayed payment
16.1	Contractor's entitlement to suspend work
16.4	Payment on termination
17.1	Indemnities
17.4	Consequences of employer's risk
18.1	General requirements for insurances
19.4	Consequences of force majeure
19.6	Optional termination, payment and release

Figure 2-1 Contractors claim under FIDIC law

Clause in FIDIC CONS 2.5	Employer's claims
11.3	Extension of defects notification period
11.4	Failure to remedy defects
13.7	Adjustments for changes in legislation
15.3	Valuation at date of termination
15.4	Payment after termination
17.1	Indemnities
18.1	General requirements for insurance
18.2	Insurance for works and contractor's equipment

Figure 2-2 Client claim under FIDIC law

2.1.5. Claim Management Practices and Procedures

“The increasing incidence of claims and disputes imply that the current claims management principles and process are ineffective in meeting industry requirements.” (Z. REN, 2001) In construction there are some bases claims to be made lawfully. According to Yi (2009) as cited by Arowoiya et al 2019, the claim administration process for the contractor is “1) intent to claim, 2) Proper submission of claim, 3) Analysis of claim and recommendation of award, 4) Negotiation and final award and 5) Claim closure.” (Arowoiya Victor Adetunji, 2019)

The procedure to be taken in claim management in Ethiopian construction is stated in different manuals, those being in PPA 2011 (Public procurement agency), MoWUD (Ministry of works and urban development) and FIDIC manuals.

2.1.5.1. PPA 2011

Claim stated in PPA 2011 manual (Public Procurement & Property Administration Agency) on how to handle the claim and the procedure on how it should be handed in clause 69 regarding additional payment and clause 73 to clause 75 regarding extension of intended completion date, compensation events for allowing time extension and acceleration respectively, clearly stated on what should be done and on what bases claims could be made. (Anon., 2011)

Claims for Additional Payment

In this clause it's stated that claim for additional payment to be considered the contractor a) should submit intention to engineer within 15 days after occurrence of said claim. B) Full and detailed particulars of the claim should be submitted not later than 60 days after the 1st notice. Here after the engineer and the client will review the claim and without prejudice determine

whether the Contractor is entitled to additional payment and notify the contractor accordingly. (Anon., 2011)

Extension of Intended Completion Date

As stated in the PPA 2011 manual, for the contractor to request for extension of completion date requires for certain events to happen. Those events being (a) Exceptional weather conditions in the country, b) Artificial obstructions or physical conditions which could not reasonably have been foreseen by an experienced Contractor, c) Compensation Event occurs or a change order for modification is issued which makes it impossible for completion to be achieved by the Intended Completion Date, d) Administrative orders affecting the date of completion other than those arising from the Contractor's default, e) Failure of the client to fulfil his obligations under the Contract, f) Any suspension of the works which is not due to the Contractor's default, g) Force majeure and h) Any other causes referred to in these GCC (General condition of contract) which are not due to the Contractor's default. (Anon., 2011)

And if the case in the statement above is applicable then notice should be given to engineer within 15 days and full particularities within 21 days. And if this is not due, then the assessment of the claim will not be due. (Anon., 2011)

Compensation Events for Allowing Time Extension

As stated in the PPA 2011 manual, as stated in the above clause there are events that are compensable for the time claim to be accepted. And those are a) Client does not give access to a part of the Site by the Site Possession Date stated in the Contractor's approved work program, b) The Public Body modifies the Schedule of other Contractors in a way that affects the work of the Contractor under the Contract, c) The Engineer orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time, d) The Engineer instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects, e) The Engineer unreasonably does not approve a subcontract to be let, f) The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Public Body, or additional work required for safety or other reasons, g) Other Contractors, public authorities, utilities, or the Public Body do not work within the dates and other constraints stated in the Contract, and they cause delay, h) The advance payment is delayed, i) The Engineer unreasonably delays issuing Interim Payment Certificates, j) Other Compensation Events described in the SCC (Specific condition of contract) or determined by the client and force majeure.

After it's determined then the engineer is due to figure out by how much the Intended Completion Date shall be extended. And all this is due if the contractor gives early warning as stated in the above clauses. (Anon., 2011)

Acceleration

As stated in the PPA 2011 manual, this claim will be made by the client to the contractor when client wants to finish the project before intended completion date. And the procedure is stated as "the Engineer will obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Public Body accepts these proposals, the Intended Completion Date will be adjusted accordingly and confirmed by both the Public Body and the Contractor." and when it comes to the modification, the manual states that "if the Contractors' priced proposals for acceleration are accepted by the Public Body, they are incorporated in the Contract Price and treated as a modification." (Anon., 2011)

2.1.5.2. MoWUD (Ministry of works and urban development)

Claim handling procedure is also stated by the MoWUD (Ministry of works and urban development). It states as "the Contractor shall send to the Engineer's Representative once in every month an account giving particulars, as full and detailed as possible, of all claims for any additional payment to which the Contractor may consider himself entitled and of all extra or additional work ordered by the Engineer which he has executed during the preceding month."

And in that sense if the intent has not been issued to engineers representative then no claim for payment can be made and is stated as "No final or interim claim for payment for any such work or expense will be considered which has not been included in such particulars." (Anon., 2011)

In MoUWD (Ministry of works and urban development) it's not stated on how many days the claim should be replied for and is not as clear and concise as PPA 2011 manual.

2.1.5.3. FIDIC

Claim handling is also stated in the new FIDIC manual (Fédération Internationale Des Ingénieurs-Conseils) and it's stated in clause 20 as, "In order to avoid ambiguity in the handling of claims, the FIDIC form of contract sets out in clause 20.1 detailed procedures for claims." (Anon., 1999)

These include that the contractor, a) Give his intention to claim within 28 days after the event giving rise to the claim has first arisen. b) Keep contemporary records on the claim issue. c) Submit detailed particulars of the amount claimed and the grounds upon which the Claim is

based. d) That the Engineer examines such contemporary records and makes determination based on the available contemporary records. (Anon., 1999)

Claim management processes

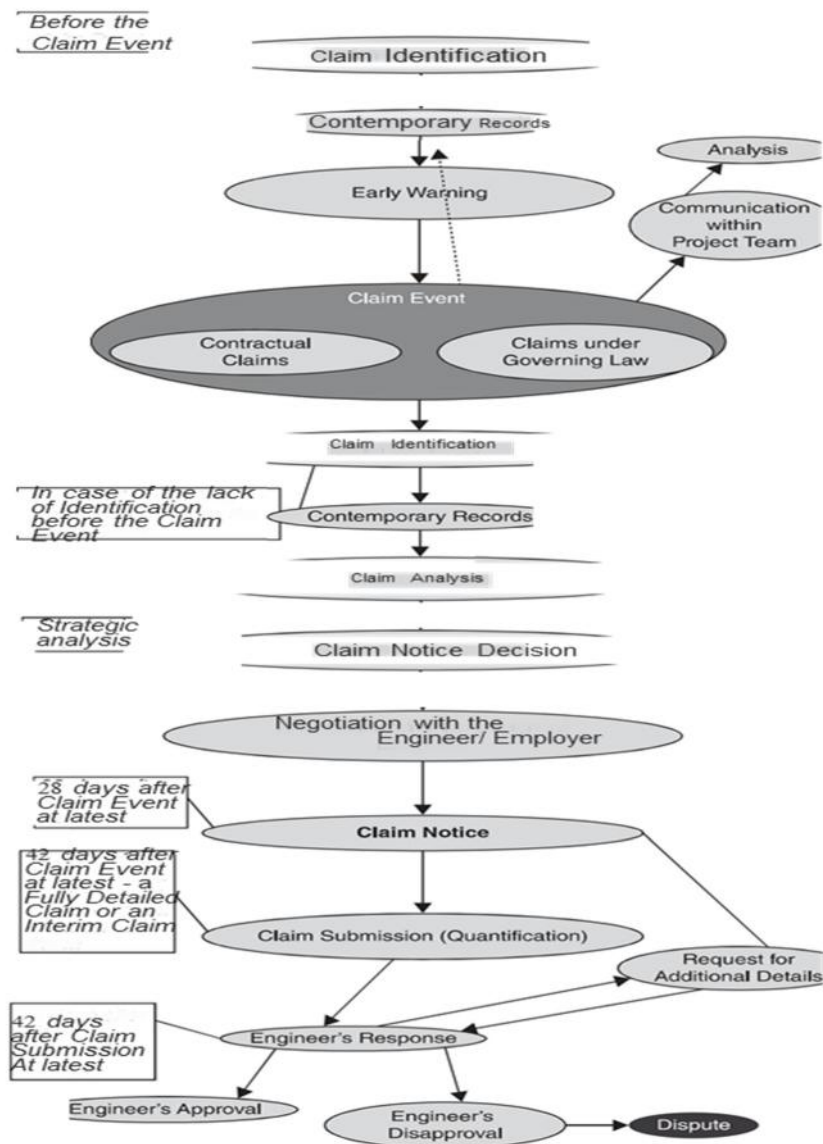


Figure 2-3 Claim Management Process (FIDIC Guide)

2.2. Empirical Literature

2.2.1. Claim management and implementation

Claim has become a great concern in the construction industry and its management has been neglected and not effectively done. In many countries, claim management process is not well understood or the parties' awareness of the process is limited.

As concluded in the research done by Akeem et al, 2019, “The process of claims management would be a success if claims were resolved and settled timely and fairly in such a way that benefits all the parties and the projects.” (Akeem Adunfe Ajayi, 2019)

In a study conducted by Akeem A. Et al, concluded that awareness level of claim was low by stating that “over 50% of the overall respondents were unaware of the structured claim management process in the industry. Making it another cause for as to why claims are becoming an issue that’s not being handled and is causing disputes.” (Akeem Adunfe Ajayi, 2019)

Another major problem faced in claim management is the actual claim implementation process as to how claim intent is submitted and what supporting documents need to be included greatly have effect on the evaluation process also. In a study done by William Vidogah and Issaka Ndekugri 1997, stated that “contractors fail to submit specific documents required for the evaluation of claims.” (William Vidogah, 1997)

In a study done in Thai by Kongkoon Tochaiwat and Visuth Chovichien, 2004, it concluded that “contractors, in average, should improve their inefficient claim management sub-processes, active notification of the change, active negotiation of the claim of change, and defensive recognition and identification of the change - while maintaining their efficient ones (active recognition and identification of the change, systematic and accurate documentation of the change, and analysis of time and cost impacts of the change)” (Tochaiwat, 2004)

2.2.2. Factors causing Construction claim

Projects are greatly affected by poor management practices in each stages of the project. And those poor management practices lead to delays of intended work and finally they lead to claim. In a study done by Zack 1997 it was concluded that “Many claims and disputes were caused by the ambiguous, incomplete and inadequate understanding of the terms of contract forms and conditions” (Jack, 1997)

In different studies done various reasons for the cause of construction claim was found and this in mind in a study done by Diekmann and Nelson, the conclusion of the study was that construction claims commonly caused was found to be due to design changes, extra work and errors. (M.C., 1985) In another study done by Phillip R. Mcdonald, 2009, the findings indicated that “the cost overrun and claim management process are negatively related.” (Mcdonald, 2009) Meaning that poor claim management led to cost overrun and in turn causing extension of time claim.

Z. Ren, g. et al (2001) stated that “there is a lack in clients involvement that is leading to claim and also human factors, inefficient claim negotiation, lack of effective claims management tools and Inadequate information and documentation were major causes to occurrence of claim.” (Z. REN, 2001)

The contractor may be entitled to claim direct loss and expense incurred if the progress of the works is materially hampered by matters for which the client is responsible. And agreeing to this statement a study done in the United Kingdom such issues regarding the matters could include: “the client instructing variations in the works, failure by the consultant team to provide information, delay on the part of a nominated sub-contractor, failure by the client to supply materials or goods, delay in giving the contractor possession of the site.” These events may also be considered "relevant events," allowing the contractor to seek an extension of time; however, a relevant event does not always result in a delay in the completion date, and thus claims for loss and expense and claims for extensions of time do not always run concurrently.

In another study done by Phillip R. Mcdonald, 2009, the findings indicated that “the cost overrun and claim management process are negatively related.” Meaning that poor claim management led to cost overrun and in turn causing extension of time claim. (Mcdonald, 2009). Agreeing to this study Zanelidin, 2006 stated that the common cause of construction claim in the UAE was found to be oral change orders and delay in payment made by owners (Zanelidin, 2006) which are a cause related to poor claim management.

According to Mohamed al Moshin (2014), the causes to claim in the research was summarised as “Delayed approvals of schedules and change orders (17.28%), Lack of expertise (6.81%), and Slow change order processing (6.81%). All of these causes are initiated by owner.” (Mohsin, 2014) It was also concluded that “Features of less degree of qualification of owners represented in shortage of qualified human resources, shortage of finance, bad control of budget.”

In another research done in the Gaza strip, the main cause of claim were found to be the awarded of contract to the lowest bidder and border closures, residents’ interference during project implementation and road blockage. (Enshassi A., 2009) From this conclusion it can be seen that in construction the rule is to choose the lowest bidder to win with a plus or minus 20 percent of the engineers estimate but this has been causing financial issues after the commencement of the projects.

In another study done in India it was studied by categorising cause of claim by owner related factor, contractor related factor, contract document related factor, project related factor, and contractual relationship related factor and external factor. And it was stated that claim caused most commonly in India was due to owners default and the lowest ranked was found to be by the contractors default.

From the literature reviewed and manuals available in the country and summarised the causes of claim can be divided into 3 parts by ownership of those causes. Those parts are due to Managements default, Contractors default and Owners/Engineers default and can be seen here under on table 2-1.

Owners of Cause	Causes of claim
Cause of claim Due to management default	Lack of awareness, knowledge and interpretation of contract terms and provisions
	Inadequate information and documentation
	Inefficient claims preparation and negotiation process
	Lack of effective claims management tools
	Insufficient time for the process (time limitations)
	Low client involvement
	Human factors
Cause of claim Due to Contractors default	Lack of awareness, knowledge and interpretation of contract terms and provisions
	Delay caused due to delay in commencement of the project as scheduled
	A schedule that is not realistic at planning stage
	Lack of Performance in managing the project throughout the life cycle
	Procurement management of the supplies or inputs for the projects
	Lack of personnel for handling claim factors
	Communication gap in the overall project needs
Cause of claim Due to Owner/Engineers default	Not knowing what to claim for
	Change of scope of project.
	Variation Works.
	Late Site handover.
Cause of claim Due to Owner/Engineers default	Late payment to contractor.
	Rigid Management system that don't take in to consideration the situation of requests.
	Delay in Clarification.
	Insufficient Issue of Working drawing and specification.
	Lack of proper allocation of budget for the project.

Table 2-1 Cause of claim due to different defaults

2.2.3. Impact of Claim in Construction

In any project claims are undesired and its best to prevent or to minimize to the best of ability. Besides incurring unwanted expense they affect the smooth flow of the futurity of the project. In a study done by Akeem (2019) “Construction projects are becoming increasingly susceptible to a variety of factors that give rise to a time extension and cost recovery. Thus, the Nigerian building and construction industry needs to develop methodologies for construction claim management process that should overcome their current problems.” (Akeem Adunfe Ajayi, 2019)

According to El-adaway et al (2009) “claims have negative impacts on projects and become inevitable burdens to the construction industry and that it is inevitable part of contract system.” (El-adaway, 2009)

There are different impacts in different types of claims and as described by Abebe Dinku and Girmay Kahssay, 2003, is that claim has financial impact, impact on project completion time and other effect of claim on project execution itself. (Kahssay, 2003) Adhering to this statement, a study done in Nigeria on Construction Project Claim Management Process it was concluded that “The process of claims management would be a success if claims were resolved and settled timely and fairly in such a way that benefits all the parties and the projects.” That being said the impact claim had in that study was sought out to be that inadequate management of claim brought about additional cost of project. (Akeem Adunfe Ajayi, 2019) And according to a study done in the United States, the impact of claim is that it caused liquidated damages, lost profit to the contractor, extended overhead cost, and excess financing cost, termination of project and price escalation. (McDonald, 1984)

In another study which was done in Abuja it was stated that “impact of contractual claim in construction is in terms of cost and time performance” and that in the time of the study it was stated that “with cost increase averaging 16.68% and time increase of 31% - 86%.” It was also stated that it has a big impact in the industry and that it is needed to have a “high level of professionalism in handling construction projects in order to reduce occurrences of claims especially the avoidable claims.” (Saidu, 2018)

Claim handling is part of construction management and if claims are mishandled then a lot of chaos could be caused. In that sense Liu 2009 stated that “An improper treatment of claims may lead to dispute which cause both direct and indirect impacts to the client, contractor and consultant.” Agreeing to this the study done in Nigeria it was concluded that “ extra financial

loss was brought to the contractor, therefore, time extension request normally consequent the additional cost compensation” it was also concluded that the effect of claims on building project were “delay in completion, reduction in cash flow, general abandonment of project, increment of cost of project, increase in contract period, dissatisfaction of clients and dispute in construction industry.” (Akeem Adunfe Ajayi, 2019)

From the literature reviewed and summarised the impacts of claim can be seen here under on table 2-2.

Impacts of claim in building construction
Disputes amongst the parties
Work Suspension
Liquidated damage
Lost Profits and revenue (For Client as time extends for completion)
Extended project Overhead
Time extension of the project
Material and equipment Price Escalation due to delay caused by unresolved claim
Impact on quality of the output of the construction

Table 2-2 Impact of claim

2.3. Conceptual Framework

The Conceptual Framework The following diagram illustrates a conceptual framework the study adopts in carrying out the study. The relationship between construction claim causing factors and effects of claim can be conceptualized as below shown in Figure 2.4.

The relationship shows a set of causes that are categorized as due to management, due to contractor and due to the client/engineers default causing a set of effects that are categorized based on the responsible body which in turn determine the outcome in terms of impact of claim in construction.

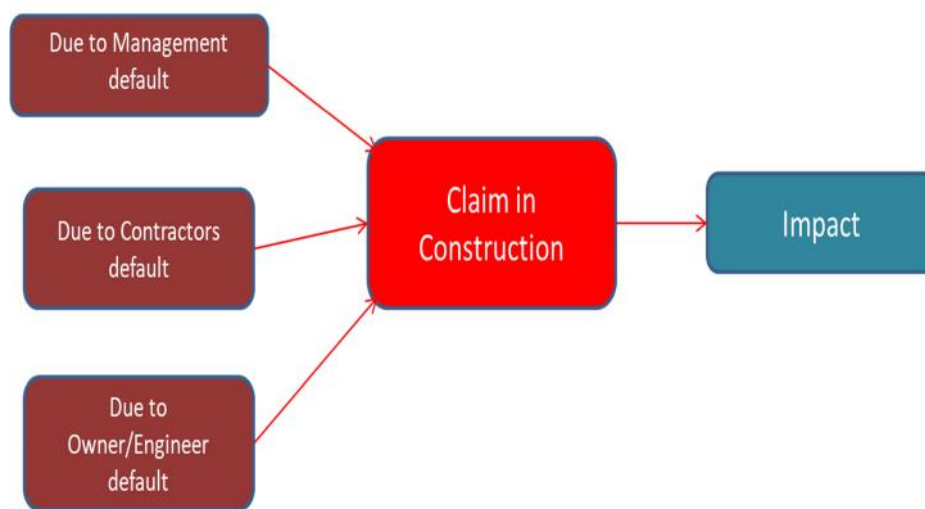


Figure 2-4 Conceptual framework

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This Section present the different mechanisms used in conducting the study. It focused on the research design population, sampling techniques, data collection, how data is analysed, reliability and ethical considerations took in the study is discussed.

3.1. Research Design and Approach

As cited by Tesfaye Boru, Creswell & Plano Clark 2007 defined research design as “the procedures for collecting, analysing, interpreting and reporting data in research studies”. (Boru, 2018)

This study took a descriptive approach in assessing claim management its cause and impact in the building construction. Descriptive approach is a method which involves assessing and describing behaviour of a subject without influencing in any way. The study answers the questions without answering why. (Boru, 2018)

This study adopted a mixed research approach and used both quantitative and qualitative research. The research aims to assess claim management practices of construction companies among grade 1 contractors (in 3 contractors, namely Elmi Olindo contractors Plc, Rama Construction and Bamacon construction). Causes of Claim and the impacts it has been identified. In other words this paper identified factors that affect the proper success of construction caused by claim.

This research adopted a cross-sectional study because data collection and analysis was conducted at one time only bases.

The main tool for data collection was Questionnaire. Interviews were also conducted. The questions in the survey prepares are based on aim of the research and it was developed by incorporating ideas and recommendations from previous studies all around the world regarding claim and its management in the construction sector. Previous studies from other parts of the world have been used as a background tool to study causes and impact of poorly managed claim and how to address the issues in construction.

3.2. Description of study variables

As discussed in Chapter 2, all constructs under claim awareness and implementation, factors causing and cost of poor claim management were drawn from various sources. For the purposes

of this research, construction experiences from various countries have been studied and adopted. In addition, dependent variables (effect of claim) and independent variables (cause of claim) have been identified from various sources.

3.3. Description of study area

This research was conducted on 3 grade 1 building construction companies located in Addis Ababa targeting to study the different claim management practices in the construction companies selected. For ease of data interpretation and generalization, this research only focussed on building construction projects.

3.4. Target Population, sampling technique and sample size

The target population for this research are Grade 1 contractors in construction industry specifically building contractor. BC Contractors registered for the budget year of 2020/2021 in the list of registered contractors in the MUDC (Ministry of Urban Development Housing and construction) is to be considered as the sampling frame. According to this list the number of eligible Grade 1 contractors is: BC - 1 found to be 75, and GC – 1 found to be 40. Out of these 115 Contractors only 3 of them are selected for this research as the 3 contractors have been in the industry for over 20 years or more and more relativity or occurrence and knowledge regarding the matter will be gotten. As a basis for this research, it relied on purposive sampling. This technique is chosen for the purposive judgement of the researcher and the research is based on technical knowledge of the topic, so the samples chosen were those of technical manpower in the industry specifically in the companies by choosing employees that have engineering degree as the case is seen and fixed by these manpower. The population of the study comprised one hundred nine technical employees of the companies (Projects managers, office engineers, site engineers, other engineers like electrical sanitary and mechanical engineers) selected that are engaged in building construction in Addis Ababa with engineering educational background and expertise as claim is caused within all fields of construction.

Census is used for target population where compete enumeration of the companies employees related to the research are included. The census comprises the population of Elmi Olindo construction PLC, having seven sites in Addis Ababa with a total of forty two engineers and eight engineers at head office level, Bamacon Engineering having three sites in Addis Ababa with a total of eighteen engineers on site and ten engineers at head office level, third company being RAMA construction with a total of three sites in Addis Ababa having thirteen engineers

of site and eighteen engineers at head office level. This makes the total target population of one hundred and nine. (Presented on table3-1)

Sample size				
Companies	No. of Sites	Total Engineers on site	Total Engineers in head office level	Total Engineers in Addis Ababa
Rama Construction	3	13	18	31
Elmi Olindo Contractors PLC.	7	42	8	50
Bamacon Engineering	3	18	10	28
Total	13	73	36	109

Source: From companies

Table 3-1 sample size

3.5. Data Collection

3.5.1. Source of Data

Relevant data was collected using both primary and secondary sources to help achieve the research objectives and answer the research questions. Primary data is an original data source sought out first hand. The primary data was obtained through the survey method, data collected through questionnaires submitted and collected from respondents and also as a primary data interview was conducted. The secondary data was derived from the review of literature. Different literatures and past studies related to claim in building projects have been searched and included as secondary data. Relevant data was mostly gathered from primary sources to help achieve the research aims and answer the research questions.

This study isn't the first to be done. In other parts of the world, similar studies have been done to study the causes of inadequate construction claim management and its causes and impact it has on construction. As a result, the researcher used secondary sources of data to include studies conducted previously in relation to claim and claim in Ethiopian construction, and based on these previously conducted research, the researcher has extended existing knowledge by offering some insight into the degree of variation in claim management practices in the construction industry, mainly in building construction.

3.5.2. Instrument of data collection

A survey questionnaire was prepared and administered on the technical staff of the selected three companies. The questionnaire consisted of close ended questions. This instrument was used as opinions can be collected within a short period of time. Since the questionnaire was to be distributed to technical teams it was administered in the English language. The questionnaire

consisted different sections and parts focusing on the research question and fulfil the objective of the research.

Kultar (2007) stated that “interview is typically defined as face to face discussion or communication via some technology like telephone or computer between an interviewer and respondent”. And according to Carolyn and Palena (2006) “the purpose of interview is to provide detailed information that data collected through other methods.”

For the purpose of this research the interview was conducted on Project managers and deputy manager from the 3 companies purposefully selected for their in depth knowledge and experience in the sector.

3.6. Data Analysis

Following data collection, the researcher analysed and interpreted the data using the Statistical Package for Social Sciences (SPSS) version 26, and then generated descriptive statistics such as frequencies, percentage, mean, and standard deviation for the quantitative data and narrative analysis for the qualitative data. The researcher also used Pearson correlation analysis to analyse the data in order to determine the relationship between the dependent and independent variables. And regression analysis to measure the impact.

3.7. Reliability and Validity

3.7.1. Reliability

Reliability ensures that internal consistency amongst factors exists (Parasuraman, Grewal and Krishnan, 2007). Tavakol and Dennick, 2011 described Cronbachs’ alpha as “a reliability measure designed by Lee Cronbach in 1951 is a coefficient of reliability used to measure the internal consistency of a scale” A reliability coefficient alpha is excellent if alpha is larger than 0.75; acceptable if alpha is between 0.40 and 0.74 and poor if alpha is less than 0.4 (Nunally, 1978; Sreiner and Norman, 2008).

Cronbachs’ Alpha was used to measure the reliability of the data collected though questionnaire distribution. The coefficient, which is based on the average correlation among items, was calculated for the main constructs using SPSS version 26 and the result is presented in table 3-

2

Main Constructs	Cronbach alpha	Remarks as per Nunally, 1978; Sreiner and Norman, 2008
Procedures and tools in Claim management	0.75	Acceptable
Cause of claim	0.7	Acceptable
Impact of claim	0.84	Excellent
Prevention of claim	0.87	Excellent

Table 3-2 Cronbach alpha values for main constructs

Accordingly, the cronbachs' alpha coefficient of 0.87 and 0.84 shown in the table indicate excellent internal consistency of items in the two constructs, while the cronbachs' alpha coefficient of 0.75 and 0.7 indicates acceptable internal consistency of items in the two constructs.

3.7.2. Validity

As stated by Roberta Heale, validity is defined as the extent to which a concept is accurately measured in a study. (Roberta Heale, 2015) The questionnaire was formulated after thorough assessment from literatures and after proper detection and approval by the research advisor was helpful to ensure validity of the instruments. To confirm the consistency of findings relating to each study topic, quantitative and qualitative analysis were triangulated. Finally, the improved version of the questionnaires was put on Google forms and the link was forwarded.

3.7.3. Ethical Consideration

During the course of this study, participants' privacy was protected, and it was made clear to all participants that their participation was entirely voluntary. Both data confidentiality and participant anonymity were preserved. Respondents' names were not included to protect the confidentiality of the information they provided. The purpose of the study was stated in the questionnaire's introduction, and privacy and confidentiality were maintained. Furthermore, all sources used in this study were properly cited.

CHAPTER FOUR

4. DATA ANALYSIS AND PRESENTATION

4.1. Introduction

This chapter presents and discusses the result of the gathered data from respondents through questionnaire and interview and its analysis and interpretation based on the objective of the study which is to assess the cause and effect of claim in building construction. Furthermore the analysis shows whether the procedure is feasible and effectively being used in the industry. The results have been identified based on the 87 questionnaires collected from the engineers in Elmi Olindo PLC, Rama Construction and Bamacon Engineering and interviews with Deputy Manager and project managers. This chapter has four sections where the first part analyses the response rate and profile of respondents by Education, Role and Experience. The second part presents the finding of the questions asked to assess the awareness and consciousness level of the respondents regarding claim management and parties affected. The third part contains the findings of the questions related to the procedures in claim management, causes, impact and prevention of claim in building construction in the companies. The interview analysis was included with the questionnaire analysis in parts.

4.2. Demographic characteristics

4.2.1. Response Rate

This study was conducted on 3 Grade 1 building contractors in Addis Ababa. One hundred one questionnaires were distributed to sample respondents in the companies in projects and head office. Of the one hundred nine questionnaires distributed eighty seven were filled out making it an 80 percent response rate. Since the questionnaire was on Google forms and all the questions were marked required all the questions were filled.

4.2.2. General Information of respondents

The first section of the distributed questionnaire assesses the gender composition, Educational background, roles and experience of the respondents. The general information gathers is as stated on Table 4.2-2.

Education Background					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's degree	60	69	69	69
	Master's degree or above	27	31	31	100
	Total	87	100	100	

Role in company					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Construction Engineer/Site Engineer	32	36.8	36.8	36.8
	Contract Admin/Office Engineer	15	17.2	17.2	54
	Other	31	35.6	35.6	89.7
	Project Manager	9	10.3	10.3	100
	Total	87	100	100	
Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 5 years	35	40.2	40.2	40.2
	> 15 Years	4	4.6	4.6	44.8
	10 to 15 Years	13	14.9	14.9	59.8
	5 to 10 Years	35	40.2	40.2	100
	Total	87	100	100	

Source: own survey data

Table 4-1 Demographic Characteristics

4.2.2.1. Educational Background

According to Barro & Lee, (2001) more years of schooling means workforce will become more highly skilled and productive, leading to higher output. (Barro, (2001)) From the summary on table 4.2-2 the educational background of the respondents the majority of the respondents are Bachelors' degree holders. From the total sample 69% (n=60) of Bachelors' degree holders and 31% (n=27) of Masters' degree holders. This indicates that the respondents have higher knowledge.

4.2.2.2. Role of respondents

The respondents roles in the companies were categorised into 3 (Construction engineer, Contract administrator/ office engineer and others being project coordinators, electrical engineers, sanitary engineers and mechanical engineers). The role of respondents has an effect on knowledge to claim and how closely they are oriented to it. The majority of the responses were from construction Engineers/site engineers 36.8% (n=32) followed by other engineers with a percentage of 35.6 (n=31). Response from Contract administrators/Office engineers was 17.2 % (n=15) were 10.3% (n=9) were from Project managers.

4.2.2.3. Work Experience

The experience level in the construction sector has an impact regarding the awareness of claim and its management. This is due to lessons learned as each project progresses by as no project has the same input or output. On table 4-1 it's shown that 40.2 % (n=35) were both < 5 years and 5 to 10 years of experience where 14.9 % (n=13) had experience from 10 to 15 years and the remaining respondents being the 4.6% (n=4) have an experience of greater than 15 years. From the data we can analyse that almost 60% of the respondents have experience of greater than 5 years therefore showing that the respondents have somehow seen the occurrence of claim in the projects.

4.3. Awareness and consciousness level

The second section of the survey asked questions regarding the quality awareness consciousness level of the respondents regarding claim management and parties affected.

Question 1 through 6 in this section of the questionnaire asked if there was a separate department for handling claims in the company or not, the consciousness of the company regarding claims, the type of claim that has occurred and which party was most responsible by the occurred claim and relevantly the most affected by the claims that have occurred have been assessed through the questionnaire responses. Furthermore in the questionnaire it was asked if the companies have mechanism in the company that in the planning stage that helped in identifying claim.

Is there Separate department that handles claims

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	8	8	8
	No	80	92	92	100
	Total	87	100	100	

How conscious is the company to claim.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very conscious	35	40.2	40.2	40.2
	Somewhat conscious	38	43.7	43.7	83.9
	Neutral	11	12.6	12.6	96.6
	Not Conscious	3	3.4	3.4	100
	Total	87	100	100	

What type of claim has occurred

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Time extension claim	17	19.5	19.5	19.5
	Cost claim	10	11.5	11.5	31
	Time extension and cost Claim	60	69	69	100
	Total	87	100	100	

Claim majorly caused by					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Engineer	17	19.5	19.5	19.5
	contractor	46	52.9	52.9	72.4
	Client	19	21.8	21.8	94.3
	Sub-contractors	4	4.6	4.6	98.9
	Local community	1	1.1	1.1	100
	Total	87	100	100	
Affected Most					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Engineer	2	2.3	2.3	2.3
	Contractor	40	46	46	48.3
	Client	45	51.7	51.7	100
	Total	87	100	100	
Is there Identification of claim on planning stage					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	11.5	11.5	11.5
	No	40	46	46	57.5
	Don't know	37	42.5	42.5	100
	Total	87	100	100	

Table 4-2 Table of Awareness and consciousness level

As per table 4-2, 92 percent of the respondents stated that their companies did not have a separate department that handled claim and 8 percent believed that there is a separate department. As this is an ambiguous response as either there is a separate department or not the information got through this question is disregarded. And out of those 87 respondents 43.7 percent believed that their company is somewhat conscious 35 percent stated that their company is very conscious and 12.6 and 3.4 percent stated that their company is not conscious and had neutral stand respectively. This shows that the companies are conscious to claim.

As described in the Mirza, M. A. (2005), Claim is a management issue and the process needs efficient and effective management during the entire life cycle of a project. So if claim is not managed well then it will lead to disputes” (Mirza, 2005) this being said the claim that has occurred in these companies has also been identified in as it’s due to unmanaged claim. The questionnaire consisted of whether Cost claim, Time claim or both Time and Cost claim occurred. Amongst the 87 respondents 60 percent replied that both time and cost claim have occurred and 17 and 10 percent stated that only time extension claim or cost claim respective to the percentage have occurred to their knowing. And the cause to claims mostly as stated by the respondents is that of 52.9 percent caused by contractor, 19.5 percent by client and 21.8 percent caused by engineer. But also 4 respondents stated that claims are being caused by sub

- contractors. Another 1 respondent stated that the cause to claim could also be local community coming into dispute with the project and not allowing the contractors to work.

The most affected party by claim as responded by the respondents is the client with a response percent of 51.7 percent followed by contractor with a 46 percent of the respondents. 2 of the respondents stated that engineer is affected by claims. According to the interviewees regarding the party that is most affected by claim 2 responses claimed contractor is at a loss because associated risks with execution of the project is implemented by contractor and every problem that might have been there even in planning stage is on the contractor making all risks for the Contractor while 2 responses stated client because contractors will claim to anything and everything in their power to not be at a loss and client just wants to get the works done and over with and finally all the financial burden will go to the client.

It was also identified if there was identification of claims in the planning stage and 42.5 percent of respondents replied that they did not know if there was or not. 46 percent stated that it was not identified at planning stage 11.5 percent replied that it was identified. As this is an ambiguous response as either it is either identified or not the information got through this question is disregarded.

From responses from the interview in the raised issue regarding awareness was that, there definitely needs raising awareness and mechanisms be enforced by involving both the Client, Contractor and Consultant and inform how critical claim resolution is in terms of the project duration and overall project cost. Another issue raised with awareness is that claim is not being taken seriously and that training needs to be given from top to bottom level workers to eradicate the causes from bottom. It was stated that all parties need awareness but the problem is that of consultants in our country need to be consulting pro the completion of the project not against contractors and pro client.

4.4. Procedures, cause, impact and prevention of claim

In the third section of the questionnaire likert scale was used to identify the applicability of the procedures and find out what causes, impacts and ways of prevention of claim in the companies were applicable most and to what the respondents most agree with. The grand mean and least mean was taken as the inference point of agreeableness of the responses. To measure the range between the mean scores the following assumptions were taken.

To determine the minimum and the maximum length of the 5-point Likert type scale, the range is calculated by $(5 - 1 = 4)$ then divided by five as it is the greatest value of the scale $(4 \div 5 =$

0.80). Afterwards, number one which is the least value in the scale was added in order to identify the maximum of this cell. The length of the cells is determined below:

-) From 1 to 1.80 represents (strongly disagree).
-) From 1.81 until 2.60 represents (do not agree).
-) From 2.61 until 3.40 represents (true to some extent).
-) From 3:41 until 4:20 represents (agree).
-) From 4:21 until 5:00 represents (strongly agree).

4.4.1. Procedures in claim management

In section 3 part 1 of the questionnaire discuss the procedure of claim management and handling. Amongst the procedures of claim management and ways of handling claims the applicability was assessed and in that assessment the items to be identified were Submission of intent to claim on time, Evaluation of claim, how claims were being addressed, Clarity and transparency of the procedure, understanding of the procedure within parties, availability of the procedure to manpower in project, knowledge of the procedure and applicability of the procedures. Amongst the items all items were more or less found to be applicable in the companies.

<i>Procedure of claim management/ handling claim in Building Construction</i>	Mean	Std. Deviation	Range
Submission of intent to claim on time/ as stated on the contract and Preparation of claim and submission of claim to Owner/Engineer	3.84	0.861	Agree
Evaluation of claim if justifiable and unjustifiable	3.92	0.852	Agree
Claim being addressed and resolved on short bases/ Efficiency of handling claims	2.61	0.92	True to some extent
Clarity and Transparency of claim handling procedure in the contract	3.79	0.929	Agree
Clear understanding of claim procedures within parties	3.75	0.879	Agree
Availability of clear procedures for all project handling manpower regarding claim	3.55	0.985	Agree
Knowledge of the claim handling/ management procedures of the company	3.62	0.918	Agree
Applicability of claim handling procedure in the company	3.7	0.929	Agree
Grand Mean	3.5975		

Source: Own Survey

Table 4-3 Procedure of claim management/ handling claim in Building Construction

As it can be seen in table 4.2 3 based on the means and grand mean being 3.55 it can be seen that all the stated items are agreed to by the respondents. But the claim resolution on timely manner is seen to be of true to some extent based on the range set as it is between the ranges 2.61 to 3.40. This shows that the procedure is being applied in the industry but the claim reply takes time as it is far from the grand mean.

So stated in the literature by the public procurement agency (PPA) the procedure to claim is stated in the manuals and that those need to be followed as per the contract they have for every project and as per the responses got from this research the procedures are applicable in the companies as the mean scores with an average mean of 3.6 rounding it up to 4 agreeing to the applicability. But on the other hand the mean score for the claim being addressed is low which affects the procedure and also the construction deliverables.

In the interview it was also asked if the procedures regarding claim were being followed and if the procedures are being followed and the responses were that it was not and that claim is not being seen as part of the managing part which is making it become an entirely big deal which in the long run causing project delay. This is contradictory to the results that were found through the questionnaire.

4.4.2. Causes of Claim in Building construction

In section 3 Part 2 of the questionnaire investigated among different factors that cause claim in building construction, causes identified from different literature have been differentiated by causes due to the default of claim management, contractors and owners/Engineers.

4.4.2.1. Due to Claim management default

Section A part 2 of the questionnaire investigated causes of claim due to the default of claim management and it was identified as Lack of awareness, knowledge and interpretation of contract terms and provisions, Lack of awareness, knowledge and interpretation of contract terms and provisions, Inefficient claims preparation and negotiation process, Lack of effective claims management tools, Insufficient time for the process (time limitations), Low client involvement and Human factors.

Causes due to management default in Building Construction	Mean	Std. Deviation	Range
Lack of awareness, knowledge and interpretation of contract terms and provisions	3.38	0.991	True to some extent
Inadequate information and documentation	3.74	0.869	Agree
Inefficient claims preparation and negotiation process	3.8	0.874	Agree
Lack of effective claims management tools	3.77	0.859	Agree
Insufficient time for the process (time limitations)	3.49	0.888	Agree
Low client involvement	3.68	1.029	Agree
Human factors	3.73	0.961	Agree
Grand Mean	3.66		

Source: Own Survey

Table 4-4 Causes due to management default in Building Construction

Amongst the identified causes the based on the range set 6 of the items set were agreed to and 1 item is found to be true to some extent. Based on the grand mean, being 3.66 the items for cause based on claim management default are found to be all items as causes.

From the responses as stated above it can be seen that is the most agreed to claim cause due to managements default. This indicates that there is Inefficient claims preparation and negotiation process as its mean is the highest compared to the grand mean even thou the claims follow the procedures and are submitted duly, the preparation and the negotiation part of the process is also not being done as it should be as its mean is 2nd highest with regards of the grand mean. This leads to the untimely approval/ rejection of claims for the matters in hand to be resolved and the continuum of the rest of the works at hand. Following this issue the second most agreed cause being that claim management tools are lacking makes the first issue more unresolvable because if there are no tools to the management then it will be hard to make the process less time consuming and effective.

From the interview while assessing the gaps in the in construction management in general trying to come in contact with claim it was seen that there are a lot of management issues that need to be figure out. These gaps affect the overall management as well as the claim management. And as per the interview it was sought out that there is a gap in the industry concerning the construction management. The interviewees stated that there is poor planning at the start of the project, untimely payment to contractor, unpredictable inflation in the local market causing a gap that usually is not being treated well as of recently another is schedule

insufficiency meaning that the master schedule submitted in the commencement of project is being seen to be not of the real completion time and is causing it to bring about management issues. Another issue that was brought up was in planning stage, design detail misses and change orders will be brought to light in construction stage, communication gap within parties has also become an issue and this gap gives way for problems not to be resolved and quality of constructions is not being controlled well as well as the manpower that is employed for the works to be done are not well trained and workmanship problems are seen very widely in the sector and this is affecting it very widely.

Amongst the raised issues the one major problem that needs to be assessed is the management and leadership skill of the managers that are employed. The managers that are employed are just needed to have technical skill and have experience, but these people not only need technical but an overall knowledge and skill in managing the finances the human resources employed on site. And amongst the issues raised the major causes of cost claim arising identified from the interview are that of cost escalations due to unpredictable inflation in the local market, time claims not resolved properly, Poor planning, time extension could also bring cost claim but not all items will be adjusted. It was also stated that while planning for the project, cost estimation is usually taken lower just to win the tender which is showing to be not efficient. Another issue raised in the interview is the major gap in the project management in relation to claim management which is leading it to claim and it was stated that Variations are usually not managed timely in the construction industry. Furthermore, there is lack of awareness how the inflation in the market affects the project completion. In order to resolve these issues, variation works must be recorded and communicated to the Client/ Consultant immediately and the Contractor needs to consider contingency in their offer to a certain degree.

6.4.1.2. Due to Contractors default

Section B part 2 of the questionnaire investigated causes of claim due to the default of contractor and it was identified as Lack of awareness, delay in commencement of project, unrealistic schedule in planning stage, lack of performance in project management, late procurement of materials, lack of personnel of handling claims, communication gap and not knowing what to claim for.

Causes due to contractors default in Building Construction	Mean	Std. Deviation	Range
Lack of awareness, knowledge and interpretation of contract terms and provisions	3.43	0.996	Agree
Delay caused due to delay in commencement of the project as scheduled	3.75	0.991	Agree
A schedule that is not realistic at planning stage	3.98	0.876	Agree
Lack of Performance in managing the project throughout the life cycle	3.88	0.9	Agree
Procurement management of the supplies or inputs for the projects	3.93	0.846	Agree
Lack of personnel for handling claim factors	3.8	0.975	Agree
Communication gap in the overall project needs	3.76	0.892	Agree
Not knowing what to claim for	3.24	0.988	True to some extent
Grand Mean	3.72		

Source: Own Survey

Table 4-5 Causes due to Contractors default in Building Construction

Amongst the identified causes the based on the range set 7 of the items set were agreed to and 1 item is found to be true to some extent. Based on the grand mean, being 3.72 the items for cause based on Contractors default are found to be all items as causes.

As shown in table 4.4-3 unrealistic schedule handed at planning stage is the most agreed to cause by the contractor which has the highest mean as compared to the grand mean. In construction the master schedule is the time table and resource allocation management tool, and so if it's unrealistic then the whole of the project deliverables will be affected and the constraints of the projects will be left unfulfilled. That being said if the schedule is unrealistic it will also affect the procurement management for the resources needed, which is the second most agreed to cause due to contractors default.

From the interview while assessing the causes the responses that were identified as major causes to time claim is that of poor procurement strategy on the contractors' side. Manpower and resource allocation is usually found to be insufficient for the project which in addition causes extension of time and that will cause disputes and conflicts among parties, idea changes bringing up to variation orders and scope change, poor performance of the contractor and insufficient budgeting. So to summarise all the listed causes to cost claim have effect on the project in a very negative way as they lead to conflicts and disputes and project delay which eventually costs both contractor and client.

Another issue raised was that there is a communication gaps, problems with coordination of projects, and managing tasks and major issues in one project even in discipline (not having enough manpower to fulfil the project), assigning required manpower for each problem like project managers project coordinators, these give rise to both time and cost claim.

6.4.1.3. Due to Owner/ Engineers default

Section B part 2 of the questionnaire investigated causes of claim due to the default of Owner/Client and it was identified as scope change, variation works, late site handover, late payment to contractor, rigid management , delay in clarification, insufficient issue of working documents and lack of proper allocation of budget.

Causes due to Owners/Engineers default in Building Construction	Mean	Std. Deviation	Range	Rank
Change of scope of project.	3.9	0.953	Agree	5
Variation Works.	4.14	0.838	Agree	1
Late Site handover.	3.91	0.94	Agree	6
Late payment to contractor.	4.08	0.93	Agree	2
Rigid Management system that don't take in to consideration the situation of requests.	4.03	0.841	Agree	3
Delay in Clarification.	3.69	0.826	Agree	8
Insufficient Issue of Working drawing and specification.	3.8	0.963	Agree	7
Lack of proper allocation of budget for the project.	3.94	0.92	Agree	4
Grand Mean	3.93			

Source: Own Survey

Table 4-6 Causes due to Owners/Engineers default in Building Construction

Amongst the identified causes the based on the range set all of the items were agreed to. Based on the grand mean, being 3.93 the items for cause based on Owner/Engineers default are found to be all items as causes.

Amongst the causes variation orders have been the most agreed to cause to delay caused by the client. Variation orders or change orders give way to the most claims of time extension and financial claim with a mean score highest as compared to the grand mean. The second major cause was selected to be late payment to contractor for the works performed. This cause has a major impact for both the contractor and the project. If payments are not made duly then the contractor might face financial problems and might hold back on procurement for coming works to be performed or might even start to execute works of low quality.

From the interview while assessing the causes the responses that were identified as major causes to time claim is that of unresolved issues from the clients' side (right of way issues), untimely payments, late approval and late solution to issues and giving a specification/design that is not feasible, variations not approved on time were also agree upon as per the responses from the questionnaire. Amongst these late payment to contractor are major causes but also another major cause of delay that leads to claim is cash flow problem of either contractor or client and this leads to claim and finally termination of project.

Another issue raised is that late submittal of working drawings, clarifications, supply of material if the projects contract is with supply of materials from the client are the major gaps. It was also stated that poor planning and lack of clear understanding about the scope of the project by the client, consultant and contractor also another major gap. This gap will be filled by preparing the realistic project planning and clear statement of and identification of scope that considers the possible limitations.

6.4.2. Impact of Claim in Building construction

In section 3 Part 2 of the questionnaire investigated among different factors that building construction is impacted with regards of claims that arise in projects.

As identified different impacts that were included are Dispute amongst parties, work suspension liquidated damage, lost profit and revenue (for contractor), extended project overhead, time extension, price escalation and impact on quality of deliverables.

Impact of claim in Building Construction	Mean	Std. Deviation	Range
Disputes amongst the parties	3.98	0.849	Agree
Work Suspension	4.14	0.765	Agree
Liquidated damage	3.95	0.926	Agree
Lost Profits and revenue (For Contractor as time extends for completion)	4.17	0.838	Agree
Extended project Overhead	4.25	0.81	Strongly Agree
Time extension of the project	4.32	0.739	Strongly Agree
Material and equipment Price Escalation due to delay caused by unresolved claim	4.45	0.711	Strongly Agree
Impact on quality of the output of the construction	4.24	0.777	Strongly Agree
Grand Mean	4.21		

Source: Own Survey

Table 4-7 Impact of Claim in Building Construction

Amongst the identified causes the based on the range set 4 of the items set were agreed to and 4 items were found to be strongly agreed to. Based on the grand mean, being 4.21 the items for impact are found to be all items as impacts of claim had on building construction.

Material and equipment Price Escalation due to delay caused by unresolved claim is the most agreed to impact as compared to the grand mean and this followed by time extension of the project being the second highest compared mean to the grand mean.

Esho fonie, (2008) as cited by Saidu, Kenneth John et al. stated that “Contractual claims in construction projects such as delay, dissatisfaction and disputes that often lead to acrimonious relationship amongst stakeholders with attendant over run in cost and time of construction projects” (Eshofonie, 2008) in that study the conclusion was that claim impact on construction projects is that of in terms of cost and time increase, which agrees to the outcome of this research.

And as stated by interview responses the outcome of these delays and the causes to claim will have an impact in time extension of the project and in turn that brings mostly cost claim maybe due to liquidated damage, price escalation, disputes and conflicts loss of potential client/business, project cost overrun. And also it could come to termination of project. Another impact to claim that was stated was that especially nowadays the inflation is off the roof and cost claim causes more overhead and it will also give head to Time extension of the project completion and the effects of time extension will add up more cost to the project.

6.4.3. Prevention of Claim in Building construction

In section 3 Part 3 of the questionnaire investigated among different ways in preventing claims form occurring in building construction. As identified from various literatures, different ways to prevent claims as follows: Assessment of logical time frame for completion, Identification & Assessments of Project Scope in planning phase, Alignment of Documents with the general rule of submission, Adopting reliable mechanism for fast resolution of dispute, Clear and concise issue of drawings and specifications, Clear cut communications throughout the project life cycle for finding problems in the project to fix them, Project Managers ability to foresee problems ahead of time and Developing a team work spirit without compromising the duty and responsibility specifically in the contract.

Prevention of claim in Building Construction	Mean	Std. Deviation	Range
Assessment of logical time frame for completion.	4.21	0.749	Strongly agree
Identification & Assessments of Project Scope in planning phase	4.27	0.702	Strongly agree
Alignment of Documents with the general rule of submission	4.2	0.775	Agree
Adopting reliable mechanism for fast resolution of dispute	4.24	0.731	Strongly agree
Clear and concise issue of drawings and specifications	4.17	0.781	Agree
Clear cut communications throughout the project life cycle for finding problems in the project to fix them	4.22	0.684	Strongly agree
Project Managers ability to foresee problems ahead of time	4.33	0.757	Strongly agree
Developing a team work spirit without compromising the duty and responsibility specifically in the contract	4.25	0.719	Strongly agree
Grand Mean	4.24		

Source: Own Survey

Table 4-8 Prevention of claim in Building Construction

On a study done by Miraz, M.A (2005) stated that “Clearly the best way to prevent claims is to have no claims to prevent! Thus, the emphasis is on how to avoid or prevent claims from arising.” It was also claimed that the ingredients to prevention of claim are “management scheme, identified risk distribution to ones in best position to control and defined responsibilities. Effort is required to align the contract documents to the defined purpose, logical risk sharing and management scheme. The seeds of claim and nutrients essential for their development are contained in the contract formulation/documentation and the information supplied or not supplied at relevant point in time. After the award of contract the opportunity to prevent nutrients for Claim comes to an end.” (Mirza, 2005)

Abebe Dinku (2003) also stated that “in most cases they are undesirable, as they impact project cost, time of completion, etc. The fact that claims are unavoidable, effort should be made to encourage the development of resolution mechanisms, to the benefit of all parties. In such cases, the best approach is not to have a hard line approach towards their resolution but create an atmosphere of partnership between all parties with the objective of solving or settling the issues.”

And as it can be seen on the table 4-8 items are seen as prevention methods being strongly agrees to and 2 of the rest items being agreed too. This shows that items are seen as significant

ways to prevent claims. Based on the grand mean, being 4.24 the items for stated for prevention are found to be all ways of prevention to claim in building construction.

Project Managers ability to foresee problems ahead of time has the highest mean score as compared to the grand mean which shows that to prevent claims from occurring, project managers should have the ability to see problems that cause claims ahead of time. This being followed by the second most highest mean as compared to the grand mean is identification & Assessments of Project Scope in planning phase and it shows that scope of projects are changing after commencement.

Arian & Pheng (2005) stated that “nothing is more constant than contractual claim during the course of a construction project, despite the best efforts of all participants during the planning, implementation and administration of the contract, claims will almost certainly occur and can be damaging to any project, if not considered collectively by all the stakeholders involved in the construction projects.” This being said with the identified methods of prevention the best way for any of them to work is if all stakeholders collectively involved in the projects.

Based on impact following with the prevention of claim from the responses got from the interview was that in one company running many projects it's a hustle running all smoothly especially the cash flow the resource allocation and especially in this country where price of materials rises by the day, in this hustle it is rare to find companies who are equipped with the critical thinking management which can get through with it and also the project managers leadership quality sometimes will also affect the flow. That being said inadequate project management and coordination will always lead to something missing from one or more projects and delays will come to rise and those delays usually are tried to be compensated with claims. To fill this gap the industry in general needs a transformation where leaders/project managers' skills need to be tested regularly and there needs to be a way for each company to have a system to have a great resource allocation techniques. Agreeing to the findings of the questionnaire regarding project managers' ability to oversee problems ahead of time.

Regarding approaches and principles to be used in the industry for prevention of claims is that every project manager critically review project schedule before actual work is commenced and identify areas that hinder progress of work. Using software such as MS Project or Primavera greatly aids the Contractor to identify critical tasks and resolve any outstanding issues beforehand.

After all the raised questions it was led to how claims could be prevented and responses were that claim cannot be prevented but minimised, however, issues leading to conflicts that arise in mismanagement of claim can be resolved by introducing various clauses in the Contractual document such as price adjustments (which are usually left not applicable in contracts), lifting of price caps completely and allowing for a certain degree of contingency when working in such a volatile market, there needs to be created a clear communication path among all stake holders of the project, and on planning stage identifying causes of claim that might occur and Better communication throughout the project, Feasible time line for the project and engineers to evaluate the schedule properly. But there were also other suggestion which were that, each party involves closely to the project deliverables in the planning stage and rule out any claimable issues or try to minimize those issues as best can. By ways of resolution of claims after they occur, it was stated that both claims are equally important in the construction sector because introducing both claims will allow for a marginal negotiation room. Focusing only on the time claim will not answer to questions relating to variation works and focusing on cost claim will impact the overall cost of the project and after they occur negotiation is found to be less time consuming and all parties will come to a term applicable. But it was brought to light that client might be at a loss but for the better outcome it should be considered. And according to the responses it is not believed to occur a project where claims do not arise

And finally from all the respondents the general statement made was that contractors and consultants are not integrating well or in other words are usually working with a mentality that one party is the enemy of the other in the industry that should also stop. This is a major issue in the country where most causes to the construction industry deterioration is happening. This statement shows the communication gap seen in the industry.

4.3. Correlation Analysis

Correlation analysis was conducted to explore the strength in the relationship between the cause and effects of claim that were conducted in the research. Correlation coefficients are used to assess the strength and direction of the linear relationships between pairs of variables. (Mukaka, (2012).)

To summarise, the correlation coefficient is measured on a scale ranging from + 1 to – 1. The degree of correlation between two variables is denoted by + 1 or -1. When one variable rises as the other rises, the correlation is positive; when one falls as the other rises, the correlation is negative. The stronger the relationship between the two variables, the closer the Pearson

correlation coefficient, r , is to +1 or -1, depending on whether the relationship is positive or negative. A value of +1 or -1 indicates that all of your data points are included on the line of best fit.

Cause of Claim		Impact of Claim
Due to Claim management default	Pearson Correlation	.276**
	Sig. (2-tailed)	0.01
Due to Contractors default	Pearson Correlation	.223*
	Sig. (2-tailed)	0.038
Due to Owners/ Engineers	Pearson Correlation	.535**
	Sig. (2-tailed)	0

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

Table 4-9 Pearson product moment correlation coefficient test

The table above summarizes the relationship between the causes of claim and impact of claim. All of the variables are strongly and positively related at $p < 0.01$. As stated above as the Pearson correlation coefficient, r , is closer to +1 the variables are positively related and accordingly even though all the variables are to the positive and shows that there is a linear association between the variables. And also the correlation between cause due to Owners/ Engineers and Impact of claim found to be that of moderate.

4.4. Regression Analysis

A linear regression analysis was done to model the relationship between dependent and independent variable.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.535 ^a	0.286	0.26	0.47849

a. Predictors: (Constant), Cause by Owner, Cause by Contractor, and Cause by Management

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.618	3	2.539	11.091	.000 ^b
1 Residual	19.003	83	0.229		
Total	26.621	86			

a. Dependent Variable: Impact of claim

b. Predictors: (Constant), Cause by Owner, Cause by Contractor, and Cause by Management

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	2.221	0.393		5.655	0
1 CAbyMGMEAN	0.001	0.113	0.001	0.01	0.992
CAbyCGMEAN	0.008	0.1	0.01	0.085	0.933
CAbyOGMEAN	0.491	0.1	0.531	4.917	0

a. Dependent Variable: Impact of claim

Table 4-10 Regression Results of Impact of claim and Causes of claim in building construction

The value $R = 0.535$ is the Pearson correlation of estimate of score and count, the value indicates the magnitude and direction of the relationship between the two variables (cause of claim and impact of claim). Since it is positive the relation is positive in direction. The value $R^2 = 0.286$ measures how well the variable count performed in explaining the variation in the dependant variable. The adjusted $R^2 = 0.26$, meaning that 26% of the variation in the causes of claim is due to the number of times there is an impact. The remaining 84% the variation in the causes of claim is due to other predictors not included in the model or uncontrolled factors. The ANOVA is an overall significance test of model parameters. Value is 0.000 which is less than 0.05 which indicates that the variation occurred in impact of claim is due to the Causes to claim through different defaults.

CHAPTER FIVE

7. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1. Introduction

This Section presents the summary, conclusion and recommendations are given based on the objective of the research. Results and discussion that is presented in Chapter four is briefly summarised in this section and depending on the summary, conclusions and recommendations have been provided.

5.2. Summary

The study attempted to examine feasibility of claim management procedure in industry and if they are being implemented well and its efficiency. Also it was assessed whether there were issues in the procedures besides the cause and impact claim has in building construction amongst selected grade 1 contractors in Addis Ababa. A total of 87 responses were sought out and with regards to the data gathered through questionnaire survey and analysed using SPSS software and also from interview summary of findings is outlined as follows:

-) Based on responses the procedure in claim management is being implemented, but claim resolution time is found to be taking longer
-) In the companies both time extension claim and cost claim arise one or the other in each projects handled and most claims caused and the most affected by the claims caused according to the findings are Contractor (53%) and client (22%) respectively. But from the findings even though contractor causes the most claims they are also majorly affected by those claims. Identification of claim in the planning stage could save a lot of hustle but according to the findings the companies do not identify claims early on in planning stage. From the findings it shows that regarding the procedure, the time it takes to respond to claims or to resolve claim issues is time intensive as compared to the grand mean ($\bar{x}=3.59$) and also that the procedure of handling claim is not majorly known by all the manpower that handles the project ($x=3.5$).
-) Regarding cause of claim, due to claim management default the most sought out is that there is insufficient claim preparation and inadequate preparation of documents, due to contractors default it was identified that unrealistic schedule and insufficient procurement management of supplies, and due to owners/engineers default variation

works, late payment to the contractor and, with a close mean, rigid management were identified.

-) Regarding the impact claim has on building construction, all the listed impacts were agreed to also having a grand mean of 4.21 and least mean of 3.95. The impact higher than the grand mean were found to be Price escalation, time extension and extended project over head as compared to the grand mean.
-) In any project prevention of problems that might arise is the best way to go, this being said prevention of claim should be a priority. As identified the most effective way to prevent claims are all the items stated with a grand mean of 4.24 and a least mean of 4.17. This being said the project manager should have a skill in foreseeing problems ahead of time and also another major way sought out is that before planning or implementation the project scope needs to be identified and assessed properly and clearly so that it is not changed once the project commences.

5.3. Conclusion

Conclusion of the study can be made based on the results found, their interpretation and discussion of the questionnaire and interview in accordance of the research question. The study has been done to fulfil the research question of the study, which is to assess the feasibility of the procedure in the management. Accordingly the following conclusions have been made.

In relation to the objective of this research, it was shown that the procedure of the claim management in the industry was available, applicable and feasible. The awareness of the respondents showed to be to a high level. Also as the findings from the questionnaire shows the procedures are being implemented but not to its fullest as the time for claim response stated to take longer than it needs to and not being resolved in short bases. But in the interview the managers stated that even the procedures are not being implemented and the consciousness and awareness regarding claim and its management is still lacking.

In relation to the problem stated by the research, the results showed that awareness of claim and how conscious companies are to it is low based on the interview response and that needs to be worked on also amongst the different causes of claim it was identified and agreed upon that most claims are caused due to unrealistic schedule in planning stage, variation works and time intensive claim resolution causing also financial claim and time extension claim.

5.4. Recommendation

Based on the findings and conclusion here under the researcher provided the recommendations in accordance to the objective so as to improve the occurrence of claim and its prevention in the building construction in Addis Ababa.

-) It was identified that causes of claims are not being identified in the planning stage so it is recommended that parties that are involved should come together at planning stage and identify any incident that might lead to claim and it needs to be planned ahead for prevention or minimisation of the risk of it happening.
-) Awareness gaps are observed in the overall man power even thou the company being conscious if the manpower that handles the project isn't aware and up-to-date the there is always risk of causation of claims. This being said awareness trainings need to be given to all the manpower that is directly handling the project works so as to minimize any unpleasant causes.
-) Communication within parties throughout the project life cycle need to be worked on as it is a major key in prevention.
-) Procurement strategies should be laid out beforehand so as to minimise shortage of materials on site when needed.

5.5. Suggestion for further research

Claims have become amongst the major causes for project deliverable failure in project that are being executed. This being said more studies need to be done on the matter. Studies in the future could change the context of this study and the focus from grade 1 contractors to lower grade and even so amongst different grades and see how claim is handled and executed amongst those grades. Another change of context could also be change of location of the study and compare claim management practices with other cities in Ethiopia.

Reference

- Abhishek Shah, D. R. B. P. J. J. B., December-2014. Types and Causes of Construction Claims. Vol. 3 (Issue 12).
- Akeem Adunfe Ajayi, O. B. A. B. A., 2019. *Construction Project Claim Management Process in Nigeria: Status, Barriers and Impact*. s.l.:s.n.
- Anon., 1999. *Fédération Internationale Des Ingénieurs Conseils (FIDIC) Conditions of contract*. s.l.:s.n.
- Anon., 2011. *PUBLIC PROCUREMENT MANUAL (PPA)*. s.l.:s.n.
- Arditi, D. & P. B. K., 1989. Expert system for claim management in construction projects..
- Arowoia Victor Adetunji, T. F. A. F. A., 2019. Effects of Claims on Delivery of Building Projects in Nigeria.
- Ashenafi Reta¹, M. B. A. A., 2019. Evaluation of Causes of Claims on Construction Projects of Southern Nation Nationality and People Region (SNNPR). Vol. 8 Issue 12(December-2019).
- Awad-Saad, A. S., (2017).. Operational Framework to Settle Contractual Claims in Construction Projects..
- Barrie, D. S. a. B. C. P. J., 1984. *Professional Construction Management*., s.l.:McGraw-Hill Book Company 1984..
- Barro, R. J. & L. J. W., (2001). International data on educational attainment: updates and implications. oxford Economic papers..
- Belay, M. D. T. E. A. a. A. S. A., 2017. Investigation of Major Success Factorson Building Construction Projects Management System in Addis Ababa, Ethiopia..
- Boru, T., 2018. CHAPTER FIVE RESEARCH DESIGN AND METHODOLOGY 5.1. Research Methodology; University of South Africa, PHD Thesis..
- Chaphalkar, N. & I. K. & P. S., 2015. *Prediction of outcome of construction dispute claims using multilayer perceptron neural network model*. s.l.:International Journal of Project Management.
- Chen, C. a. W. D., (2011) . Study on construction process control claims management. Applied Mechanics and Materials.
- Cheryl Semple, F. T. H. a. G. J., 1994. Construction Claims and Disputes: Causes and Cost/Time Overruns.
- D, V.-S. a., 1989. Civil Engineering Claims.
- El-adaway, K., 2009. Contractors' claims insurance: a risk retention approach.
- Enshassi A., M. S. E.-G. S., 2009. "Contractors' Perception towards Causes of Claims in Construction Projects".
- Eshofonie, F., 2008. Factors Affecting Cost of Construction in Nigeria..

- J., A. J., 1988. Construction Claims: A Quantitative Approach.
- Jack, J., 1997. Claims prevention: offense versus defense..
- Jergeas, G. F. a. H. F. T., 1994. Contactors' Construction Claims Avoidance.
- Kahssay, A. D. a. G., 2003. Claims in international construction projects in Ethiopia and case studies on selected projects. Volume vol. 20, pp. 1-13.
- Kassay, G., 2003. Claims in international projects in Ethiopia.
- Kerzner, H., 2013. Project Management: A Systems Approach to Planning, Scheduling, and Controlling..
- Kululunga, G. K. W. M. R. a. E.-F. F., (2001). Construction contractors' claim process framework..
- Levin, 1998. Construction Contract Claims, Changes & Dispute Resolution.
- M.C., D. J. a. N., 1985. Construction claims: frequency and severity.
- Manzanera, K. B.-B. a. I., 1990. "Claim Management" Project management.
- Marsh, 1992. *Contracting For Engineering And Construction Projects*. Hampslure England: Gower Publishing Limited.
- McDonald, P. R., 1984. Construction claims costing for owners and contractors.
- Mcdonald, P. R., 2009. *Construction claims costing for owners and contractors*. s.l.:s.n.
- Mirza, M. A., 2005. *Construction project claim management. Paper presented at PMI® Global Congress 2005— Asia Pacific, Singapore*. Newtown Square,: PA: Project Management Institute.).
- Mohammed S. Hashem M. Mehany, P. G. B. & Behzad Esmaeili, P. G. G. P., 2018. Claims and Project Performance between Traditional and Alternative Project Delivery Methods.
- Mohsin, M. A., 2014. Claim Analysis of Construction Projects in Oman.
- Mukaka, M., (2012).. Aguide to appropriate use of Correlation coefficient in medical research..
- PMBOK Guide Project Management Institute, I., 2004. *A Guide to the Project management body of knowledge*. 3rd edition ed. s.l.:s.n.
- Project Management Institute, A. G. t. t. P. M. B. o. K., 2000. Newtown Square, Pennsylvania: s.n.
- Rauzana, A., 2019. Cause of claim in cosntruction projects.
- Roberta Heale, A. T., 2015. Validity and reliability in quantitative studies.
- Saidu, K. J. L. O. I. I. a. S. B., 2018. Impact of Construction Claims on Public Building Projects Performance in Abuja.
- Tochaiwat, K. & C. A., 2004. A Survey of Thai Contractors' Construction Claims and Claim Management..

William Vidogah, a. N. I., 1997. Improving Management of Claims: Contractors Perspective..

Young, V. Z., 2018. Construction Management: Claim management.

Z. REN, C. J. A. & O. O. U., 2001. Construction claims management: towards an agent-based approach.

Zaneldin, E., 2006. Construction claims in United Arab Emirates: Types, causes, and frequency.

Appendix I: Questionnaire

Addis Ababa University

College of Business and Economics

School of Commerce

Department of Project Management

MA. Project on Claim management

Dear Respondents,

My name is Emnet Kefyalew and I am a Master's student in Project management at Addis Ababa University School of Commerce. This is a questionnaire survey I have developed to gather the necessary data for fulfilment of my Master's project on **Claim and Its Impact in Building Construction Projects in Addis Ababa.**

I would first like to thank you for sharing your time to take part in this questionnaire survey. Please be informed that this survey will STRICTLY be used for academic purposes ONLY to explore the Claim Management Practices in various building construction companies in Addis Ababa, and therefore, your responses will be held confidential.

Furthermore, your genuine response will play a crucial role towards attaining a precise understanding on the construction practices in relation to Claim. To this end I kindly ask you to truthfully provide the required information so that it is possible to advance the knowledge of and possibly improve Claim management practices in Addis Ababa.

Part I. General Profile

Educational Background	☐ Master's degree or above	☐ College Diploma
	☐ Bachelor's degree	☐ High school Completed
Role in the Construction Project	☐ Project Manager	☐ Contract Admin/Office Engineer
	☐ Construction Engineer	☐ Other
Years of Experience	☐ < 5 years	☐ 10 to 15 Years
	☐ 5 to 10 Years	☐ > 15 Years

Part II. Research Related Questions:

Please tick on the box for a response you feel is appropriate for the following questions of the section.

1. Is there a separate department that handles claim management in your organization?
☐ Yes ☐ No
2. How conscious is your company whenever there happens to be a reason for claim to occur?
☐ Very conscious ☐ somewhat conscious ☐ Neutral ☐ Not conscious
3. What Kind of claim has occurred in your company? (Tick more than one box, if applicable)
☐ Time Extension claim ☐ Cost Claim ☐ Others
If other is selected please specify _____
4. Claim is caused by different factors that occur in the life of the project. So which party is responsible for most of the claims created?
☐ Contractor ☐ Client ☐ Engineer ☐ Other
5. Which Party do you believe is the most affected by the claims?
☐ Contractor ☐ Client ☐ Engineer ☐ Other
6. Does your company have a mechanism to identify the occurrence of claim at the planning stage of the project?
☐ Yes ☐ No

Part III. Rating Scale Questions: Claim Management procedures, Causes of claim, Impact of claim, Prevention of claim

A. Procedure and tools of claim management/ handling claim

Please tick on the space you feel is appropriate for the following. Scale rating description: 5= Highly Applicable, 4= Applicable, 3= Moderate, 2= Very Low Applicable, 1= Not Applicable

S No.	Procedure of claim management/ handling claim	Rate				
		5	4	3	2	1
1	Submission of intent to claim on time/ as stated on the contract and Preparation of claim and submission of claim to Owner/Engineer					
2	Evaluation of claim if justifiable and unjustifiable					
3	Claim being addressed and resolved on short bases/ Efficiency of handling claims					
4	Clarity and Transparency of claim handling procedure in the contract					
5	Clear understanding of claim procedures within parties					
6	Availability of clear procedures for all project handling manpower regarding claim					
7	Knowledge of the claim handling/ management procedures of the company					
8	Applicability of claim handling procedure in the company					

B. Cause of claim in building construction projects

Please tick on the space you feel is appropriate for the following. Scale rating description: 5= Very Strongly Agree, 4= Strongly Agree, 3= Agree, 2= Strongly Disagree, 1= Very Strongly Disagree.

A. Due To Claim Management Default

S No.	Causes of claim Due to Claim Management default	Rate				
		5	4	3	2	1
1	Lack of awareness, knowledge and interpretation of contract terms and provisions					
2	Inadequate information and documentation					
3	Inefficient claims preparation and negotiation process					
4	Lack of effective claims management tools					
5	Insufficient time for the process (time limitations)					
6	Low client involvement					
7	Human factors					

B. Due to Contractors Default

S No.	Causes of claim due to Contractors default	Rate				
		5	4	3	2	1
1	Lack of awareness, knowledge and interpretation of contract terms and provisions					
2	Delay caused due to delay in commencement of the project as scheduled					
3	A schedule that is not realistic at planning stage					
4	Lack of Performance in managing the project throughout the life cycle					
5	Procurement management of the supplies or inputs for the projects					
6	Lack of personnel for handling claim factors					
7	Communication gap in the overall project needs					
8	Not knowing what to claim for					

C. Due to Owner/Engineers Default

S No.	Causes of claim due to Owner/Engineers default	Rate				
		5	4	3	2	1
1	Change of scope of project.					
2	Variation Works.					
3	Late Site handover.					
4	Late payment to contractor.					
5	Rigid Management system that don't take in to consideration the situation of requests.					
6	Delay in Clarification.					
7	Insufficient Issue of Working drawing and specification.					
8	Lack of proper allocation of budget for the project.					

C. Impact of claim in construction

Please tick on the space you feel is appropriate for the following. Scale rating description:
5= Very Strongly Agree, 4= Strongly Agree, 3= Agree, 2= Strongly Disagree, 1= Very Strongly Disagree.

S No.	Impact of claim	Rate				
		5	4	3	2	1
1	Disputes amongst the parties					
2	Work Suspension					
3	Liquidated damage					
4	Lost Profits and revenue (For Client as time extends for completion)					

S No.	Impact of claim / Cont....	Rate				
		5	4	3	2	1
	Lost Profits and revenue (For Contractor as time extends for completion)					
5	Extended project Overhead					
6	Time extension of the project					
7	Material and equipment Price Escalation due to delay caused by unresolved claim					
8	Impact on quality of the output of the construction					

D. Prevention of claim in construction

Please tick on the space you feel is appropriate for the following. Scale rating description:
5= Very Strongly Agree, 4= Strongly Agree, 3= Agree, 2= Strongly Disagree, 1= Very Strongly Disagree.

S No.	Claim Prevention	Rate				
		5	4	3	2	1
1	Assessment of logical time frame for completion.					
2	Identification & Assessments of Project Scope in planning phase					
3	Alignment of Documents with the general rule of submission					
4	Adopting reliable mechanism for fast resolution of dispute					
5	Clear and concise issue of drawings and specifications					
6	Clear cut communications throughout the project life cycle for finding problems in the project to fix them					
7	Project Managers ability to foresee problems ahead of time					
8	Developing a team work spirit without compromising the duty and responsibility specifically in the contract					

Appendix II: Interview Guide

I appreciate for giving me your time to have this interview with me. My name Emnet Kefyalew, MA graduate student in Project Management at AAU. The main purpose of this interview is to collect data for the research entitled “Assessment of Claim and Its Impact in Building Construction Projects in Addis Ababa: selected grade 1 contractors.” Therefore, I kindly request your cooperation and sincere response to the interview session.

Position/Title: _____

1. What do you believe is a major gap in construction management that you believe that is affecting it gravely?
2. What are the major causes of delay/Time claim in the construction project? What is the aftermath of those delays?
3. What are the major causes of cost claim in the construction project? What is the aftermath of those claims?
4. What is the processes/procedure of claim that should be followed when it happens? From where was it derived?
5. Is the claim handling procedure really being applied in the industry?
6. What are the major gaps that you have observed in the construction industry especially in the project management that lead to claim? How do you believe those gaps will be filled?
7. Do you propose any approaches, formats models or principles for use in the industry regarding claim that would benefit it?
8. Do you think that the current Ethiopian Building construction practice needs a raise in awareness regarding claim management practices? Who in the field needs the awareness most?
9. What are the mechanisms to be adopted to prevent claims in the construction projects?
10. What type of claim resolution method have you adopted and among them which one do you believe is the best that you recommend?
11. Do you think that it is possible to accomplish a construction project without raising any claim?
12. Which party is more vulnerable to claim? Why?
13. Do you have any recommendations for the betterment of the practice?