ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

CAUSES OF CONSTRUCTION PROJECT FAILURE AND ABANDONMENT

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ASSESSMENT ON THE CAUSES OF CONSTRUCTION PROJECT FAILURES AND ABANDONMENT: The Case of Ayat Real Estate CMC Project

A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF PROJECT MANAGEMENT PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF ARTS IN PROJECT MANAGEMENT (MAPM)

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Declaration

I hereby declare that the study entitled "ASSESSMENT ON THE CAUSES OF CONSTRUCTION PROJECT FAILURE AND ABANDONMENT" is the result of my research and original work except for the literature review, where sources have been clearly identified and duly acknowledged. This research has not been submitted for any degree at this or any other university.

By: - Yeheyes Ayele Signature Date

Abstract

If we look at Ethiopia's total project investments, it is evident that over one third of it belongs to construction projects. Construction projects have defined starting and ending dates. A program(schedule) is set for these projects, funding is devoted and there are also quality constraints that will be sent. There are goals and objectives that are expected to be attained as well. If a project fails to attain these, we can say that it has failed. project can fail or get abandoned for different reasons. There are different projects that fail in Ethiopia. The reasons could be economical, could be related to the lack of administrative policies, the working taskforce may not be devoted or well trained, there could be a communication gap, the project clients may not have proper consultation amongst themselves, They may not be able to work under strenuous circumstances and constraints. This project aims to employ questionnaires and semi structured interviews in order to determine the most common causes of failures and abandonments in construction projects. While doing so, it is mainly going to focus on the Ayat Real Estate CMC Project . In this particular research, we are mainly going to deal with causes like customer, consultant, contractor, external environment, time and budget as the main culprits. The failure and abandonment of the Ayat Real Estate CMC project in Addis Ababa has been identified to be a result of a total 34 sub factor. In order to obtain relevant data, this study used both qualitative and quantitative methods. The researcher employed surveys and semi-structured interviews. Totally, fifteen questionnaires were distributed to the selected participant consultant and the contractor's experts participating in the building project and out of the total samples 20 responses were collected. The remaining 5 respondents provided data through interviews. These respondents were from the client's side. Data was acquired through interviews with these 5 respondents. The researcher carried out the investigation in the hopes of possibly decreasing/getting rid of the construction abandonment and failure causes. In this regard governmental policies and regulations should be prepared by studying the effect of such failures and abandonments can have on ongoing projects. The clients should also be open to make the pertinent amendments and take into consideration the external factors. The client should also undertake the financial planning methods and should employ the same starting from the very beginning and there should be as reliable estimate provided by professionals and consultants. A risk management plan or legal mechanism shall also be devised in order to minimize the loss of the company and ensure the safe up keeping of the reputation.

Keywords: Construction project failures, construction projects, Construction project abandonment, Construction project failure and abandonment

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List of Abbreviation/Acronyms

A.A. – Addis Ababa

A.U – African Union

BoQ – Bill of Quantity

CM – Construction Management

EBCS- Ethiopian Building Code of Standards

EU- European Union

PCMH- Patient Centered Medical home

PMI- Project Management Institute

SPSS- Statistical Package for the Social Science

ToR- Terms of Reference

UN- United Nations

List of Tables

List of Figures

Table of Contents

CHAPTER ONE: INTRODUCTION

1.1. Background of the study

"Success" and "failure" go along together. It is impossible to picture one without the other. Understanding and duly analyzing failure is helpful in giving a definition for success. (Fineman, 1987). Although there are lots if instances of failures, the managers usually; tend to ignore the failures and hide information related to failures. The intention of protecting the reputation of those parties who were involved prohibits sharing experiences in relation to these failure instances. (Ortega, 2000).

Each business strives to become successful. This is obvious in the construction industry as well. There are lots of researches that have been carried out to indentify and understand the factors that contribute to project failures. (Jari, 2013).

If we look at the construction industry in Ethiopia, it is obvious that the industry plays a major role in the economy of the country. Under volume VI 2006/2007 of the Ethiopian economy report, it is prescribed that investment related to real estate activities holds around 40% share of the total investment project in the country. The report also indicates that the building construction sector has obtained about a double digit growth and that it is expanding around 37% every year. The country is welcoming a new development phase.

According to an architectural research of Okey Nwanekezie, Walpole Nwanguma (2019), "the failure and abandonment of development projects is related to the construction development works being discontinued or stopping to get maintained and it is related to no intention being for their continuation". "If the stakeholder bodies agree that the initial cost has been covered, the project may be considered a success. There are instances whereby the project designs are delivered but the project may still be considered a failure. This is when the deliverables agreed upon by the key stakeholders are not attained. We can understand from this that project success and failures are not solely about facts but also about deliverables". These deliverables may be related to time, cost, etc.

"We shall also understand how the project will be understood. These constraints like cost, time and quality shall be attained for the business. As Addis Ababa is the center for different international organizations, there is a desire for real estate development and for hotel services. Addis Ababa has also become the third diplomatic community. The first is New York, while the second is Geneva. There are lots of hotels, the tourism industry is also thriving. The city his hence expanding to keep up with the international standard that

is customary in hotels".

"If projects are abandoned, it is obvious that the government loses a lot of money. It will not be able to obtain profit from the investment outlay. It is also obvious that they will not be able to obtain the benefits that they hope to obtain. All the stakeholders including the contracts the failure and abandonment of development projects is the act of discontinuing any activities or maintenance works on such construction development project within a given time frame of the contract agreement and with no intention of returning to the development. For the case where the main stakeholders agreed that a project had to outstrip its initial cost the project may still be considered a success".

"Indeed if a design delivered all the effects that was in the refocused out in the design designs, it may still be considered a failure if it did not include vital rudiments that the crucial stakeholders demanded. Thus this does not suggest that design success and failure are not just about the data, nor is it simply about what was delivered. It's also critical about how the design is perceived. Thus, in order to succeed, a design must deliver the constraints i.e. cost, quality, and time and it also must deliver the business benefits presented in the case". Generally, "the aspiration to invest in the hostel business in Addis Ababa is inspired by the vacuity of request openings for hostel development. There's a high demand for high standard hostel services at present due to the megacity being a endless position of different transnational associations.

The fact that Ethiopia being the home to the third- largest politic community in the world after New York and Geneva, the country and Addis Ababa, in particular, has come home to several new star hospices, the business has increased the demand for the hostel business sector, bringing foreign currency to the tourism frugality". "There are limited hospices that can meet the needed norms to host similar high- end guests and businessmen. This obliges the megacity to expand the hostel service assiduity to manage with the inflow in demand for transnational standard hostel service. Abandoned systems inadvertently affect the government; massive totalities of plutocrat are generally tied down. Contractors, advisers, guests, development enterprises, merchandiser's suppliers of structure accoutrements, and indeed all stakeholders are impacted by the circumstance of abandonment and failure.

In Ethiopia's environment, systems are associated with failures and abandonment because of numerous reasons which include, warrant of backing, poor design planning, poor governance policy, poor pool, lack of communication, lack of discussion to the design heirs, incapability to work in triadic constraints, elite prisoner among others. Despite the

soberness of the issue, there appears to be a lack of inclusive exploration involving both questionnaire checks and interviews with all crucial stakeholders". This paper seeks to bandy the causes of construction design failures and abandonment the case of Ayat Real Estate CMC Project construction design that's located in Addis Ababa. Also, the experimenter will punctuate the recommendations to be done to avoid minimize similar antecedents.

1.2 Background of Ayat Real estate

The real estate market can be grouped into three broad categories as: residential, commercial and industrial. Residential real estate can include undeveloped land, houses, condominiums, and town homes. Commercial real estate on the other hand can include office buildings, ware houses and retail store buildings. Whereas, factories, mines and farms can be categorized as industrial real estate. (Menen Abebe Abera, Regulation of Real Estate Business in Ethiopia June, 2010Addis Ababa. The construction industry is one that has a special role in Ethiopia quest for development. One can say that there is no development sector into which construction does not enter. The construction industry plays a key role in building economic infrastructure, building and renovation of residences houses. In Ethiopia especially in Addis Ababa housing now days has become one of the complex and necessary needs in the market.

The great demand for housing and real estate housing shows the strong development of real estate. Buyers of residential houses (Real estate) got the idea of purchasing the houses from electronics and print medias, sales persons or from social medias the majority of home buyers go online for their search for their future home. (Real estate in digital age.2017 report).

Ayat Real Estate is a shareholder's company that was created in 1997 and is one of the pioneering Ethiopian companies in this sector. They have managed to complete over 5,000 residential units, making them one of the most experienced in this sector. Ayat Real Estate's history and background indeed makes them the largest construction company focused only on residential homes in Ethiopia. They had a bumpy beginning when they were first building and selling the Ayat Real Estate villa houses in the Ayat area, with rumors of low quality building materials being spread.

Today, the Ayat villas which once sold for about 375,000 ETB are now being sold in excess of 20,000,000 ETB. Furthermore, in order to pass on the savings to its clients, Ayat Real Estate has bought and built factories for the purpose of producing the building materials they need, such as terrazzo tiles, concrete hollow blocks, marbles, prefabricated slabs, septic tanks, metal doors/windows, wooden doors/cabinets, and more.

1.3 Statement of Problem

The building and construction industry plays a very dominant role in the economy of any nation. A healthy economy usually experiences an increase in building and construction activities, but in a

depressed economy, the incidence of project abandonment and construction failures tends to be more prevalent. Akindoyeni (1989) qualitatively reasoned that some of the causes of project abandonment and construction failure in Nigeria are deaths of client, inability of client to attract fund and lack of good planning.

The abandonment of development projects is the act of discontinuing any activities or maintenance works on such development project within a time frame of the contract agreement and with no intention of returning back to the development (Spelman, 1993). Similarly, O'Flaherty (1993) while reflecting on property development projects suggest that it is when an owner or developer is ceasing to provide the required maintenance management to a developed property. There could also be construction failure due to improper planning.

One of Ethiopia's most important profitable sectors is the construction assiduity. Despite its significance to the frugality, it has faced multitudinous difficulties as a result of its failure to meet its objects. Undetermined project failure and abandonment issues have allowed for a variety of mischievous impacts on both the construction sector in particular and the overall frugality. One of the main difficulties in the Ethiopian construction environment is the lack of plutocrat, poor design planning, governance programs, bad labor force, lack of communication, lack of customer discussion, and incapability to work under triadic limitations, systems are still largely abandoned at different stages of construction. This affects the customer and construction consultancy enterprises as a result of its massive investment loss to all the involved parties and government not being suitable to profit from the intended purpose.

According Onyekpere,(2011) the impact of failed systems in terms of cost and schedule overruns on a nation's frugality is enormous. Construction design planning is the crucial measure in executing a design within the design constraints; time, cost, quality. Developing the budget and schedule of work is a critical task in managing the construction. Specialized aspects and organizational opinions about the relationship between design actors and indeed which associations to include in a design.

Multitudes of researches have been conducted to assess, investigate and evaluate the failure and abandonment of the Addis Ababa housing development projects so far. However, as stated earlier, the success of the project is only limited to the completion of 180,000 houses that are completed and delivered to the beneficiaries, as witnessed by the Addis Ababa City Administration's reports (2018). But it is also well known that even those completed houses were not on time, within budget and as of the required minimum quality.

In relation to project management, there have been many reasons mentioned by different scholars. Some of the causes for project failure and abandonment, most mentioned by researchers so

far, were underfunding, poor or misunderstanding of project objectives, project complexity, over expectation, communication management, poor prioritization of tasks, resource related issues, conflict in interests, change of government or policies and so on. For instance, according to Damoah, (2015) researches indicate that there are common causes that run through the project management literature. These include: expertise or knowledge in the area, funding, planning, resources, communication, scope change, and socio-cultural factors.

No other exploration has been done in the selected area on why the design is now registered as a failed and abandoned the design and the experimenter believed that it's necessary to probe the factors responsible for the failure and abandonment of the Ayat Real Estate CMC Project structure design located in A.A.

1.4. Basic research Questions

The research questions include

- What are the causes of project failure and abandonment for the building project of Ayat Real Estate CMC Project?
- What are external environmental factors for project failure and abandonment for the building project of Ayat Real Estate CMC Project?

1.5. Objectives of the study

1.5.1. General Objective:

The General objective of the study is to find out the reasons why the building project of Ayat Real Estate CMC Project was abandoned and failed.

1.5.2. Specific Objective:

The specific objectives of the study are the following:

- To find out the causes of project failure and abandonment the building project of Ayat Real Estate CMC Project;
- To find out external environmental factors for project failure and abandonment the building project of Ayat Real Estate CMC Project;

1.6. Significance of the study

Abandonment and failure in construction project can do to any design if not duly managed and this study is significant to all the stakeholders of the design including the customer, the adviser , the contractor and indeed the government itself in dwindling/ barring an investment failure by relating the root causes of abandonment and failure of a construction design and helps in suggesting results approaches to help farther circumstance of the problem. It also helps other experimenters to further research in the area.

1.7. Scope of the study

The compass of the exploration study is rigorously confined to the reasons why the Ayat Real Estate CMC Project development design was abandoned and failed. By ranking the factors, it only concentrates on the root causes of failure and dereliction. Methodologically, the study uses a mixed approach i.e. both qualitative and quantitative approaches and data was gathered for this study from just three parties the customer, the adviser, and the contractor.

1.8.Limitation of the study

Lack of time and work-related stress were obstacles the researcher faced while conducting the study. Data collection for the project was highly challenging because of the short time allotted for it, and the majority of the sources for the literature review came from the internet. The minimal number of responders is due to the study's single construction project focus the Addis Abeba-based Ayat Real Estate CMC Project.

1.9. Organization of the study

The study consists of five chapters. The first chapter highlights the background of the study; which includes state of the problem, research questions, and objectives of the study, scope, significance and limitation. The review of the related literature is discussed in the second chapter. It presents theoretical and empirical literature which serve as the basis and proof to support the basic questions of the study. Chapter three contains about the research methodology which includes the research design, approaches, types and sources of data, method of data collection and analysis, target population and validity and reliability. Fourth chapter focuses on the presentation, analysis and interpretation of the data and finally the last chapter deals with, conclusions and recommendations based on the findings.

CHAPTER TWO: RELATED LITRATRURE REVIEW

2.1. Introduction

Under this chapter of the research project paper, the available literatures on the area of the research topic under caption are reviewed. These literatures are obtained from books, journals, government publications and other dependable sources. Possible causes of project failure are discussed in detail using the theoretical and empirical perspectives. Before discussing causes of project failure, concepts and definitions of some terms that are related to the research topic are explained briefly.

2.2. Theoretical review

2.2.1. Project Planning Definition

According to PMBOK Guide 5th edition, planning is one of the operation functions which involve the determination of operations, pretensions, and styles to realize these destined objects. It gives a base course for perpetration, monitoring, and evaluation of conditionings also, design planning is among the first phases and conditioning to be fulfilled which enables design directors to see design compass that defines what's to be included within the design and what's not.

2.2.2. Construction Project Planning

"Grounded on the resource attained from the sanctioned website of Gilliard Construction operation; Construction design planning involves creating a development plan for a construction design". In general, the pretensions of a construction design plan were enlisted as follows

- Defining the work tasks of each reality involved in the design.
- Illustrating the relationship between different work tasks and the individual realities that are performing those tasks.
- Making opinions about which technologies will be used to bring about the successful completion of the design.
- Give a comprehensive assessment of all coffers needed to complete a design.
- Use the plan to arrive at a timeline and budget for the design.

"The tasks involved within the construction planning process are generally undervalued by people. But in fact a design plan can be used as a standard to understand design cost estimates and the completion deadlines. Therefore, a design plan shall be each inclusive and shall consider different angles. It must also include styles to ameliorate the effectiveness of the whole design".

2.2.2.1. What's the Purpose of a Construction Project Plan?

"The purpose of preparing a construction plan is to give a dependable document which will serve for reference. A strategic plan will be prepared at the morning of a design and this plan will enable the stakeholders of the design to stick to the pretensions which were indicated in the first place during the progress of the design". "On a functional position, design planning is necessary to determine the costs associated with a design and to pinpoint the completion time. The medication of a strategic plan allows the design director to be more accurate on the design completion deadline and incorporate necessary workshop to bring the design to completion".

"At the functional position, the accurate strategic plan describes what works shall be done and the order that needs to be followed. This can be prepared at any time during the design and directly shows what shall be conducted next. A construction design references systems and enables operation as well as conservation tasks".

2.2.2.2. Types of Construction Project Planning

According to PMBOK- 5, "in the operation and perpetration of construction systems, construction planning is a critical and delicate undertaking. It entails opting a technology, defining work tasks, estimating the coffers and durations needed for specific tasks, and relating any relations between the colorful work tasks. A good construction plan is the foundation for creating a budget and a work schedule. Indeed if the plan isn't written or else formally recorded, developing the construction plan is a crucial step in construction operation. In addition to these specialized factors of construction planning, organizational considerations about design party connections and indeed which associations to share in a design may be needed. For illustration, the extent to which sub-contractors will be used on a design is frequently determined during construction planning".

"Like a operative, a diary will start from the result(i.e. a installation design) and must figure out the way that shall be taken to reach that result. Construction itineraries also face the problem of choosing the stylish among multitudinous indispensable plans".

Eventually, "utmost complex systems bear consideration of both cost and scheduling over time, so that planning, monitoring and record keeping must consider both confines. In these cases, the integration of schedule and budget information is a major concern".

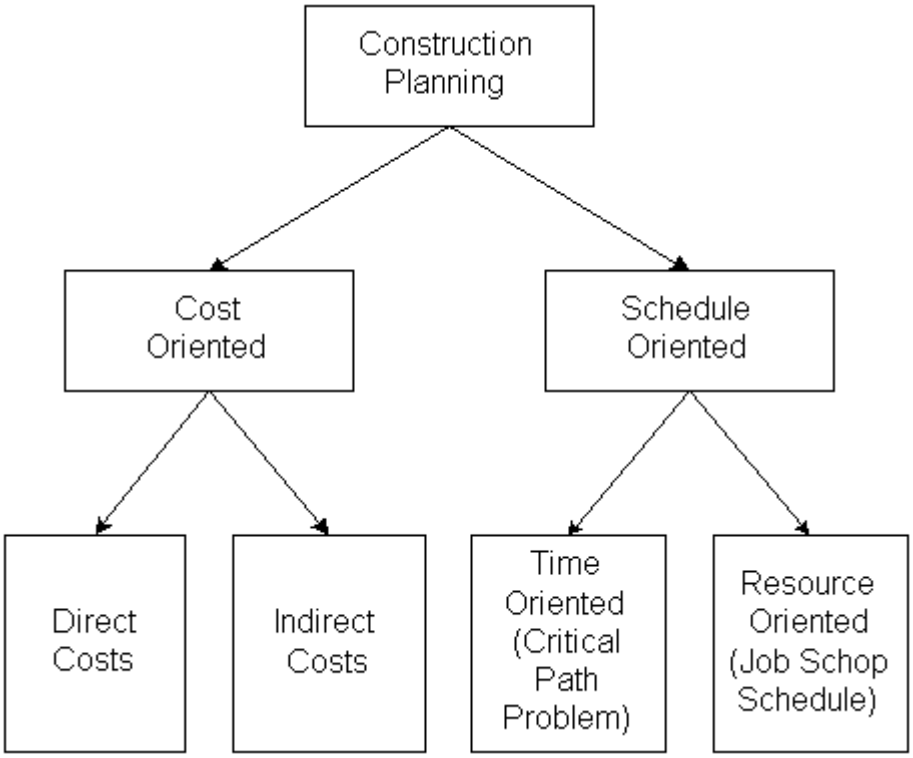

Figure 1. Alternative Emphases in Construction Planning

Sources: PMBOK- 5

2.2.3. Construction Management

According to Shanmukha(2017), "Construction operation deals with the provident consumption of the coffers available within the least possible time for the successful completion of a construction design.' Men',' accoutrements ',' ministry', and' plutocrat' are nominated as coffers in construction operation".

2.2.3.1. Objects of Construction Management :

In Shanmukah(2017), planning, scheduling in construction operation, it's stated the most objects of construction operation are

- Completing the work within estimated budget and specified time.
- Maintaining a character for top quality workmanship
- Taking sound opinions and delegation of authority
- Developing a company that works as a platoon.

2.2.4. Stages of Construction Management vs. the Construction Process

According to Kirt Gilliland from Gilliard construction operation, "Before we get into the construction design operation process, it's important to distinguish it from the construction design as a whole. For reasons that will come apparent as we go on, these two processes are both simple and separate. Let's begin with the fundamentals". "The maturity of construction systems is completed in a straight line. At the launch, there is an idea that is put to the test to see if it will work. A position is

chosen, a design is created, and accoutrements are collected. Physical construction begins at this point. The design is finished formerly construction is completed, and the proprietor may begin using the recently constructed area". "The stages of construction design operation, in discrepancy to the course of a structure design, occasionally lap. Although the construction operation process must follow the overall development of a construction design, it's non-linear in that design directors must deal with a range of colorful associations involved in the design at the same time. They could be supervising the design process while uniting with the engineering and architectural brigades and accepting flings from the general contractors who'll be working on the design. Although each of the groups with whom the construction director is involved is working in a direct fashion on the design, the design director is coordinating all of their sweats". Due to this, construction design operation requires an individual to move seamlessly between different stages in the construction process contemporaneously. This balancing act can present challenges, particularly for large or complex systems, which highlights the significance of working with an effective design director with demonstrated experience on systems of an analogous size and compass.

Pre-Project Administration

According to Yu Ren Wang and George Gibson "(A study of pre-project planning and design success using ANNS and retrogression models) Pre-project planning is the design phase encompassing all the tasks between design inauguration to detailed design. The development of a design compass description packages is one of the major tasks in the pre-project planning process. One of the most important effects produced during the pre-project administration stage is a strategic plan. The strategic plan for a design will serve as the guiding document that the construction director refers to throughout the life of the design. It'll guide opinions that will impact both the budget and timeline for completion, so having a establishment understanding of the customer's wishes and icing their feasibility from the onset of the design is essential".

Pre-Construction

According toproest.com "Pre-construction services are primary planning and engineering services offered by construction companies before a construction job indeed begins. This pre-construction planning stage involves defining the design, relating implicit issues, planning and scheduling, the compass, cost estimation, and analysis of the job's requirements.

"Once the pre-project administration stage is completed the construction project director will snappily begin assembling the platoon needed to complete the design. This will include a design platoon that will begin working on a primary design. This platoon will include an architectural and masterminds that will work nearly during the pre-construction stage, and latterly with the general contractor during the physical construction of the design. During this stage the construction design

director will work nearly with this design platoon, as well as the design proprietor, to finalize a project design and insure that the design is feasible. An important part of the pre-construction stage is securing the structure permits needed to actually complete the design". "Assuming that all necessary permitting for the design has been secured, the construction director will secure a general contractor and any technical labor needed to complete the design. Also, any accoutrements or outfit needed for the design will be lined up for the physical construction stage. Formerly all the pieces are in place for construction to begin, the coming stage of the design will start".

Physical Construction

"Effective construction directors are privately familiar with the physical construction process and numerous come from a background of working on construction systems. This on- the- ground experience proves inestimable in relating problems before hand on. However, the construction director will work with the general contractor or any subcontractor involved to insure that remediation sweats are put in place to address the issue, If an issue shells. The thing of this is to avoid any impact on the design completion timeline or budget. Flash back that construction systems largely do linearly, so one small hiatus in the process can lead to larger detainments down the road".

Post-Construction

Once physical construction of a design has been completed; the job of a construction director is not finished. In order to close out a design with success, a construction director will first travel the completed structure, generally accompanied by someone from the architectural platoon, to identify any areas that do not meet the design's conditions. Once all of this way is completed, the construction director will begin collecting all of the attestation from the design. Project document bonus will bear the construction director to gather documents generated during the course of the design from all of the realities involved in it. The construction director will also assemble these documents and further them to the design proprietor for their records. Once the proprietor has all of the documents needed for design bonus, the design is completed and physical residency of the space takes place.

2.2.5. Significance and challenges of construction systems

2.2.5.1. Significance

According to Ethiopia's Construction Industry Policy(July 2012) published by the ministry of civic development and construction, "the construction assiduity is a major sector in which both the public and private sectors invest significant totalities of plutocrat. The construction sector's proportion of GDP at constant introductory prices climbed from 4.3 percent in 1993E.C. to5.8 percent in 2002E.C. demonstrating the significance of expanding profitable structure in attaining the country's Growth and Transformation Plan(GTP). A significant portion of the country's budget is devoted to

profitable development through structure finance for the construction of colorful structures, railroads, and structure, as well as artificial systems. By spending its plutocrat, the private sector contributes significantly to the value added of structure".

"The construction assiduity of Ethiopia contributes so important to the reduction of poverty, in adding job openings through small and medium enterprise development and job creation through the construction of low- cost houses in Addis Ababa which was latterly replicated to other regions. Ethiopia has also issued consecutive public procurement reforms to cleave to good governance principles, reform sweats were made to promote competitive extending for the selection of suppliers and for effective delivery of systems with predictable cost and time".

"Ethiopia has now begun a long- term development Vision 2025 whose overall thing is to achieve sustainable mortal development with all pre-requisites for a middle- income country by the time 2025. The ministry of civic development and construction(July, 2012), foresees the creation of a robust, varied, strong and competitive frugality which will effectively deal with the challenges of development and that can fluently acclimatize to the dynamic request and technological conditions in the indigenous and global frugality. The senses linked because the essential emulsion for the attainment of the Vision 2025 objective includes the expansion of structure as a pivotal component towards the attainment of faster profitable growth".

2.2.5.2 Challenges of construction in Ethiopia

"The Ethiopian construction assiduity, like that in utmost developing countries, faces challenges that stymie its development. Generally in construction, when conditions in the field turn out to be more complex than what was anticipated in the planning and design phase, fresh costs and time are demanded. Any axes can affect productivity position, damage accoutrements and work in place. Also the assiduity, utmost of the time, is custom acquainted, meaning that it's delicate to use mass product ways. Because of all these factors and others, it's delicate to prognosticate directly how important plutocrat will be necessary to complete construction systems" (Gould, et al, 2002). "Creating a large installation takes a long time and generally involves a large capital investment. Cost overruns, detainments and other problems tend to be proportionally monumental" (Gould, et al, 2002).

"Cost is one of the primary measures of a design's success. This is true, especially for public systems in developing countries like Ethiopia, because public construction systems in these countries are executed with scarce fiscal coffers. Construction systems suggested that the common criteria for design success are generally considered to be cost, time and quality" (Arditi et al, 1997; Frimpong et al, 2003). Atkinson (1999) called these measures as the 'iron triangle '. Songer and Molenaar(1997) considered a design successful if it was completed on budget, on schedule,

conformed to stoner prospects, met specifications, attained quality of workmanship and minimized construction aggravation. Generally, a design is considered successful if the design is completed within a stated cost or budget, getting the design into use by a target date, meets the specialized specification, and if there's a high position of satisfaction concerning the design outgrowth among the design actors.

“Completion alone doesn't constitute success for the design proprietor. For the proprietor, much of the success of a design depends on numerous factors, the most important of which is design completion within specified cost parameters (i.e. within a specified budget). The alternate most important factor affecting success is on time completion as detainments in completion of installations frequently directly equate to fiscal losses due to lack of profit from installation operation”(Darrell, 1995).

“In Ethiopia, the present state of the construction assiduity falls short of meeting domestic and transnational quality norms and the performance demand anticipated from the sector” (MoWUD, 2006). “Construction systems have problems with construction ways and operation as well as limitation of finances and time. The critical problems are incapability to complete the systems on schedule, low quality work and cost overrun. In general, most (if not each), construction systems witness time overrun and bring overruns during their prosecution phase. An examination of the records of further than four thousand construction systems by Morris et al,(1998), showed that systems were infrequently finished on time or within the allocated budget. Other experimenters have also observed that time and cost overruns are common in the construction assiduity worldwide” (Arditi et al, 1985).

Numerous papers written in construction business states that “the development assiduity contains a supreme part within the frugality of any nation, where a full of life frugality generally experiences a rise within the construction conditioning also, but in a veritably slow frugality, the actuality of design abandonment tends to be more expansive”. In keeping with Abdul Aziz Hussin and Abdelnaser Omran(2011)), the difficulty of abandoned systems may be a global miracle that and this issue may be a negative factor to the stakeholders of these systems, plus the general public itself.

Ayodele and Alabi(2011) “linked significant causes of design abandonment as shy planning; shy finance; affectation; ruin of contractor; variation of design compass; political factor; death of customer; delaying in payment and unskillful design director. Other causes which were less significant are wrong estimate, defective design, shy cost control, change of precedence, indecorous attestation, unqualified/ inexperience advisers, executive/ legal action, disagreement and natural disaster. These causes may not be generalized for all types of systems”. For case, Ineffective design

planning was set up to be relatively significant to beget of tertiary institution and civil engineering abandoned systems by Ewa(2013) and Ubani and Ononuju(2013) independently. Although, the work of Ewa(2013) showed that shy finance and affectation weren't significant causes of design abandonment, the study by Ihuah and Benebo(2014) and Otim etal.(2012) agreed with Ayodele and Alabi(2011). still, Ihuah and Benebo(2014) study on real property. values indicated disagreement(Odeyemi, 2013), wrong estimate(Otim etal., 2012) and change of precedence(Ewa 2103) were significant cause of abandoned systems contrary to submission of Ayodele and Alabi(2011). Off reinforcement studies by Khalid(2010), Otim etal.(2012), Yap(2013) and Twumasi- Ampofo etal.(2014) on the causes of abandoned systems indicated analogous causes to those formerly linked in Nigeria but their significance and criticality appear to be different.

"Studies on abandoned systems from the developed countries would on average give background information because their focus is on abandoned parcels exercise (Abandoned Houses Work Group, 2004; Mallach, 2004, 2006; The United States Conference of Mayors, 2008)". The linked causes presented in Table 1 are arranged in order of their frequence of circumstance in the reviewed literature. The review linked fifty- four (54) causes of construction systems abandonment. Thirty-one(31) of these causes which were set up to have passed at least doubly and nine(9) others which passed formerly but were significant in the reviewed literature formed the variables for the questionnaire for the study.

2.2.6. Construction project abandonment and failure

2.2.6.1. Construction Project Abandonment

Aluko, O.O. (2008) "Construction design abandonment in Nigeria a trouble to public frugality. Knowledge Review, 16(3), 18- 23. Changes in the construction assiduity that's facing a demand in excess of the capability to supply increase the cost and prices of construction conditioning. This creates an influence for the growth of the frugality as a whole". Thus, the downturn is the frugality has led to the abandonment of numerous systems and accordingly escalation of design costs, shy conservation, uncompleted and unacceptable systems.

2.2.6.2. Causes of Abandonment

The need for clarity of object and proper planning in the course of design prosecution is apropos if similar design aren't to be abandoned. The major causes of design abandonment are as follows

1. Shortage Finance of Project. - "This is a recreating problem in both public and private sectors. Oduyinka and Yusuf(1997), affirmed that proprietor's cash inflow problem is a major factor responsible for abandonment of construction systems.(Aluko, 2006), explained that participation result in a lesser meeting of social requirements and adding effective application of coffers at the

disposal of a particular community similar that if eliminates" white giant" systems. He averred that contrivers should work nearly with the colorful interested and implicit impacted groups and grease a probative terrain for working together". During the participation process, contrivers should give druggies the occasion to

1) Identify their requirements and preferences;

2) Set pretensions;

3) Voice their ideas and opinions;

4) Make opinions;

5) Be involved in executions;

6) Estimate the issues and

7) Set up medium to follow up on post residency conditions.

2. Improper Planning of systems: "Acceptable project planning needs proper, effective and effective point layout and fiscal planning. Esenwa(2004) believes that good planning and association will be of little use if construction begins before the contractor has prepared his program of subcontractors and has agreed this with the mastermind and the customer. Low level planning contributes to waste of time on construction spots and accoutrements deaths". Acdedeji(1998), suggested that the ideal of planning construction work is generally that of completing a specified quantum of work within a specified duration and at a preliminarily estimated cost. He asserted that, time is the unit, which receives lower attention, but to which for lesser effectiveness; the planning of time should be nearly linked. Thus, the major factors involved in acceptable design planning are cost, time, resource vacuity, quality of finished work and safety.

3. Political Forces: Omoniyi(1996), editorialized that changes in government have frequently meant changes in programs. At similar times, systems goggled by former administrations generally meet with terrible lapses.

4. Affectation in Project Cost: "Affectation has frequently led to the increase in outflow and accoutrements cost. Medube and Sharke(2001), observe that numerous contractors allow for high inflationary decoration in their input prices, which is economically injudicious. On several occasions, del/ and been endured in the course of prosecution of systems having been caught- up in an inflationary circle, the cost of completion occasionally triplets the original".

5. Unqualified/ Inexperienced Advisers: During the alternate democracy, there was an exigency trend in the construction diligence, which has no small means backed abandonment of systems (Omonuiyi, 1996J. The issue of' Man knows man' has taken over all angles of our actuality. The goods are that constants that aren't good end up being commissioned to handle the systems. Reference to their class vitae and once systems isn't made. The effect is that these advisers take

wrong design opinions, which ultimately lead to detention and presumably bring overruns.

6. Lack of Acceptable Personnel position: "Inadequate number of professed and unskilled force coffers was set up to be an essential aspect of project prosecution. The deficit of which results to an increase in the rate at which systems are being abandoned". Akingbohungbe(2003), "editorialized that inadequacy of the needed number of professed labor force will decelerate down the pace of construction works with the effect of increased cost of construction".

Impacts of Abandonment

The construction assiduity plays a veritably dormant part in the frugality of a nation. An effective construction assiduity is a prerequisite for effective public development since structure and civil engineering workshop are contributors to gross fixed capital conformation and public development. Construction embarked upon by both the private and public sectors is meant to ameliorate the general living conditionals of Nigerians in similar area as transportation, entertainment, employment openings and enhancement in technological and directorial moxie. Some of the effects of abandoned systems are as follows

1. Unemployment: "A design if abandoned leads to severance for both professed and unskilled workers. It occurs in a situation whereby professed workers who take up systems grounded on their moxie and unskilled workers on the same job remain idle and unemployed if and when reactivated, similar systems may not be handled by the former contractors".

2. Reduction in Government Revenue: "Impositions and statutory freights are charged by government in the course of construction and later. Abandonment of systems makes all the payments insolvable. Therefore, the quantum of profit accruing to government reduces and this leads to the incapability of government to give essential services to her people".

3. Reduction in Economic Conditioning: Anuobi (1997) asserted that "construction assiduity is an essential contributor to the process of development. He averred that in every organized mortal community, the construction assiduity is intricately interwoven with the frugality but the inordinate frequency of abandoned systems due to political insecurity in the country has contributed to the straits of the frugality". This had led to the drop in the tempo of profitable conditioning

4. Lowering the Standard of Living: When systems are abandoned, people who had formerly been engaged and who could go to buy their diurnal requirements come jobless. Always, there's a reduction in the individual and commercial purchasing power.

5. **Wastages of Equipment on Site**: Waste is the most precious item on construction point and this occurs as a result of design abandonment. The accoutrements and factory left on point get exposed to extreme rainfall conditions, which hamper their play at the time of reactivation.

6. Increase in Final Cost of Project: "A design before abandonment formerly had an original cost of correlation. At the reactivation, either by former or new contractor, the completion cost would have increased as a result of payment for idle and unproductive lime, arising from contractors claim, and cost of re-mobilization and prices of accoutrements. Other goods are extension of time, increase in ruin of enterprises and companies". Seeley(1993), conceded that any change in an assiduity as large as construction has a significant effect on the rest of the frugality and its influence is presumably lesser.

2.3. Empirical Review

An empirical literature review is more commonly called a systematic literature review and it examines past empirical studies to answer a particular research question (Nakano and Muniz, 2018). Empirical research is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief. Under this section, prior researches conducted on the subject matter of this research were assessed and reviewed to affirm the facts and issues raised here as a Related Literatures.

According to a review on abandoned construction project cause and effects (2015), when a progress of a specific work faces too many problems and seems to be impossible to continue further on resulting the project/task to prevent completely, it's therefore defined as an abandoned project. Akindoyeni A. (1989), stated that if projects are to be executed completely, planning is that the most vital agenda to be administrated. This statement is further elaborated by Ogunsemi D.R. (1991) the successful completion of a project depends on adequate planning where financial planning is additionally included.

Accordingly, researches have been devoted to identify and evaluate factors that account for failure. For instance, Shehu et al. (2014) explored the construction cost performance in Malaysian construction industry and found that there are cost overruns of 55%. However, the cost overrun in the private sector was more than those in the public sector. They also found that the various sectors of the countries perform differently in terms of the negative cost variance. They attribute this cost overrun to procurement method traditional, design and build and project management; and projects size large scale and medium size projects perform poorly than small size projects. They further link it to the nature of the project new or refurbishment.

Assaf and Al-Hejji (2006) assessed the causes of delay in large construction projects in Saudi Arabia from contractors, consultant, and owners. They identified seventy-three causes and also found that time overrun is between 10% and 30% of the projected duration. Odeh and Battaineh (2002) identified twenty-eight most important causes of construction projects delays in the traditional type

of contracts from the viewpoint of construction contractors and consultants in Jordan. The contractors and consultants agreed that the top ten most important causes of delays are: owner interference, inadequate contractor experience, financing and payments, labor productivity, slow decision making, improper planning, contractor management shortage in materials, unrealistic imposed contract duration and subcontractors. They categorized them into eight and ranked them in descending order, they found that clients related issues were the most important factors, followed by contractors, consultant, material, labor and equipment, contract, contractual relations and external forces related factors respectively. Using a questionnaire survey and interviews data collection methods from projects consultant engineers, contractors and owners, Sweis et al. (2008) identified the most important causes of Jordan construction projects delays as: financial difficulties by contractors, too many change orders by the owners, poor planning and scheduling of the projects by the contractor and shortage of manpower.

Among the papers entirely focused on the subject at hand, Damoah, (2015), made to investigate the causes and effects of project failure in government projects in developing countries that took Ghana as a case study. This research used an exploratory research design, and a mixed approach which constitutes both qualitative and quantitative approaches. It used a mixed method of sampling technique by following a sequential sampling approach with semi-structured interview and questionnaires, then qualitative and quantitative analysis for the qualitative and quantitative data respectively. On the quantitative data, Statistical analyses performed comprised descriptive analysis, Means, Spearman Rank Correlation Coefficients, and Kruskal-Wallis H test of difference in ranks.

Makalah, Contoh (2008), and Oyelola. W (2010), has reasoning on the failure or abandonment of a project, which are: 1) incorrect estimation; 2) unskilled personnel; 3) inadequate planning; 4) poor risk management; 5) misunderstanding of the work requirement; 6) poor quality control by regulatory agencies; 7) corruption and communication gap among the personnel. They researchers also added further on other factors like 1) cost; 2) the developer and the contractors where the clients have difficulties in engaging with the contractors and as well as with the designers where they do not meet to the expectations of the clients; and 3) contractors fail to prepare vital inputs such as materials, manpower, and machines efficiently on time.

According to Emoh et al. (2015), the rate at which construction projects fail, or are abandoned, some even under construction, is retrogressive in most developing economies. The rate of project failure, manifesting as abandonment, structural collapse, cost overshoots and client dissatisfaction, is indeed high. Many of the factors established as being highly important border on having the right skills and expertise. As far as project success is concerned, the inference made is that possibly, the many cases of abandonment or collapse may not be unconnected with lack of the required expertise.

The frequent changes in the prices of raw materials have been identified as the most important single factor occasioning project failure. This is not unexpected, given the high rate of importation of raw materials, whose prices will then depend on the stability of the dollar. Import substitution is an urgent need in Nigeria's construction industry sector. Unless the most essential materials can be produced locally, the volatility of prices of raw materials will make successful project implementation very tasking.

They also added that variation of project scope is an important cause of project failure and should, where possible, be avoided. This may be because such variations are accompanied by sometimes serious contract price variation of several times the original project cost. When the client cannot pay, the result is project failure. There should be clear articulation of needs and designs from the outset, to give little room for this variation.

After the analysis, they found out that the rate of project failure, manifesting as abandonment, structural collapse, cost overshoots and client dissatisfaction, is indeed high. Many of the factors established as being highly important border on having the right skills and expertise. As far as project success is concerned, the inference made is that possibly, the many cases of abandonment or collapse may not be unconnected with lack of the required expertise. Uneducated men are known to parade the streets looking for contracts to implement. Because they cannot make accurate design or cost estimates, the outcome is a high rate of project failure.

The researchers conclude that the most important factor for project failure is increase in the price of starting materials. As a recommendation they suggested that the results their research to be widely disseminated and used in community enlightenment, and in further policy guidance and regulation. They also recommended that the study be applied to the entire South East, Nigeria in order to generate better client satisfaction in subsequent projects.

Locally, a research done by Bahru (2012), assessed the housing projects executed by AAHDPO and explored what could have been the causes of the project failures with respect to the quality aspect of the buildings. She explained the structure of the project office and the vital stakeholders in it, such as the project office, the consultants, the contractors and the MSEs. The main objective of this study was to identify why small-scale contractors and MSEs struggle to deliver good quality houses despite the AAHDP Office's efforts to promote them, and to draw conclusions about what needs to be improved for them to be able to improve their performance.

The study also aimed to identify major and minor defects in the newly constructed houses. The objective is addressed through three research questions that are formulated to find out the effect of the capacity building schemes, to find out the constraints of small-scale contractors and to identify defects observed in the constructed houses.

This research involves both qualitative and quantitative approaches for data collection and analysis. To gather quantitative data, four survey questionnaires were administered to small-scale contractors, MSEs, consultant and housing occupants. For qualitative approach, in-depth interviews were carried out to purposefully selected respondents. In addition, observation and film were used. Lastly, data were collected from documents such as policy documents, reports and contract documents. The main activities in the research design are core problem identification, research objective to tackle the problem, operationalize the variables through intensive literature review, identify population, data collection and data analysis and concluded the research.

The research eventually analyzed the constraints that could contribute to the poor performance of small-scale contractors and MSEs. The main constraints identified are technical incapability of MSEs and managerial incapability of both small-scale contractors and MSEs. Besides more constraints related to stakeholder management, culture, material, environment and equipment are identified. Problem in collaborative working atmosphere, lack of construction management practice, lack of quality control practice, lack of strict supervision, lack of testing mechanism, lack of technical and managerial knowhow, lack of equipment support are some of the constraints.

Finally based on the findings the researcher recommended that special attention need to be given to both small-scale contractors and MSEs in order to improve their performance. In addition, the whole construction management process should be improved then cooperation between stakeholders, strict inspection of construction materials and inspection of works executed should be practiced.

Gerawork et al. (2020), has conducted a performance evaluation of Housing Construction Project on the 20/80 condominiums at Bole Arabsa site, Addis Ababa. The objective of this paper is to measures the performance of governmental housing construction projects using earned value analysis. The research is a case study type and mainly conducted at the BOLE ARABSA site. From the case study, the finding indicates that almost all sample blocks from Bole Arabsa site suffering delays and few cost variations. Material shortage, unit rate change, and work variation were the main reason for the negative cost and schedule variations. In her conclusion, she found out that almost all Sample blocks schedule performance implies delay. The main factors stated were: Material shortage (the consultant prepared a wrong quantity of material), materials were not delivered as per the schedule, water shortage and electric power problem, the slow decision-making process and design modification.

2.3 Conceptual Framework of the Study

The main objective of this study is to identify cause of project failure and abandonment. Based on the objective of the study, the following conceptual model is framed. Even though literature is not extensively found upon causes of project failure and abandonment, as previously discussed in the

related literature review parts and a few studies mentioned under, project failure and abandonment is caused by client related causes, consultant related causes, contractor related causes, time and budget related causes and external factors related causes. so based on theoretical and empirical literature, conceptual framework is developed as follows :-.

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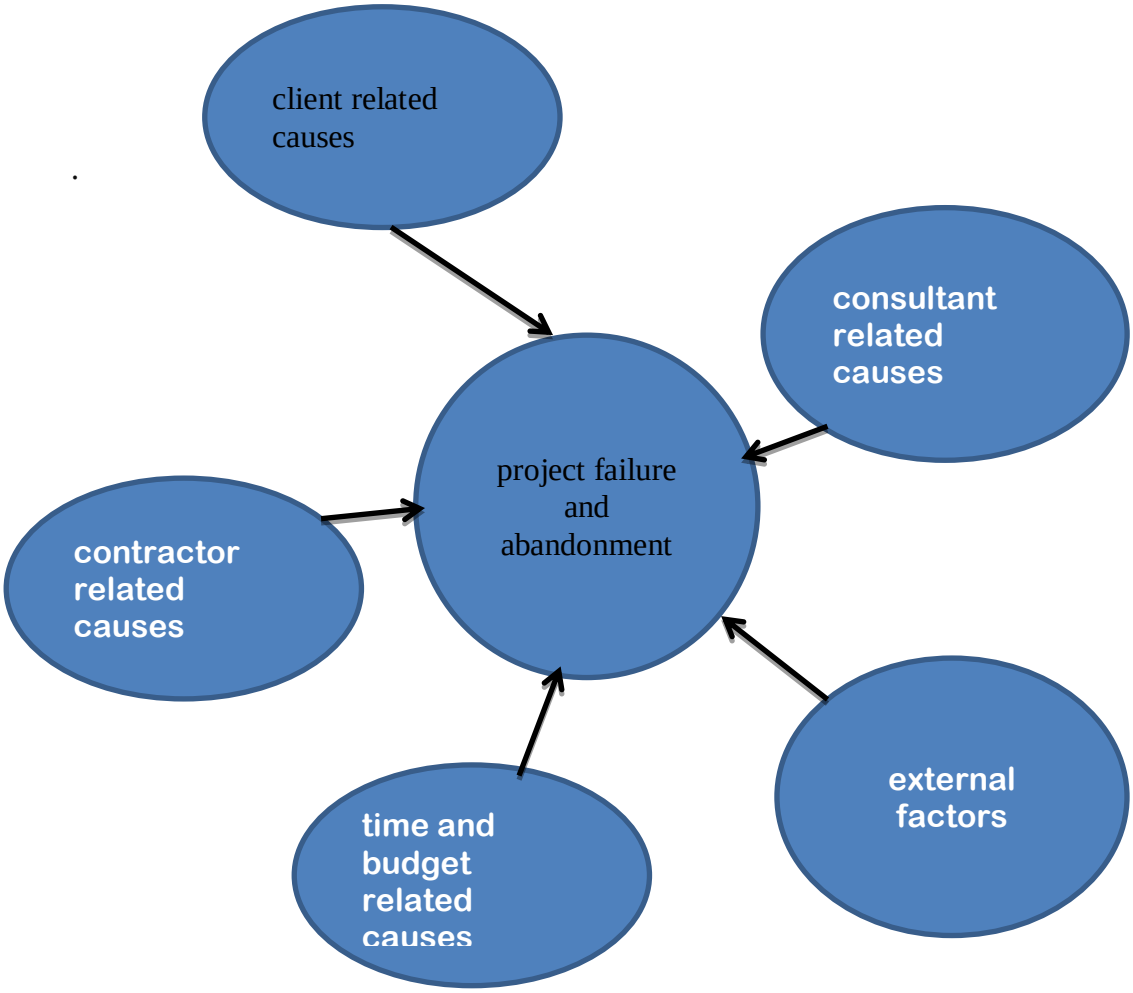

Figure 2. Conceptual Frame work

Source: Own Elaboration based on reviewed literatures and empirical studies

CHAPTER THREE: METHODOLOGY

3.1. Description of the Study Area

The study is a case study in the cases of construction abandonment and failure in Addis Ababa, the case of Ayat Real Estate CMC Project Project. Assessing the causes of abandonment and failure of construction in Addis Ababa is stemmed from the fact that the construction assiduity is a major factor in the frugality of Ethiopia and to barring or drop the causes to the problems will have a great part in having an effective result in the construction sector.

3.2 Research Paradigm, Approach and Design

3.2.1 Research Paradigm

A research paradigm is a philosophical framework that your research is based on. It offers a pattern of beliefs and understandings from which the theories and practices of your research project operate. A research paradigm consists of ontology, epistemology, and research methodology.

Common examples of research paradigms:

Positivism: Positivists believe that there's a single reality that's possible to measure and understand. Because of this, they're most likely to use quantitative methods in their research. Typically, positivists propose a hypothesis that can be proved or disproved using statistical data analysis. Positivism tends to investigate the existence of a relationship between two variables rather than the reason behind it.

Constructivism: Constructivists believe that there's no single reality or truth, but rather multiple realities. They devote themselves to understanding and interpreting the meaning attached to an action. For this reason, constructivists tend to use qualitative research methods, such as interviews or case studies, which focus on providing different perspectives. Constructivism aims to provide the answer to "why."

Pragmatists: Pragmatists believe that reality is continually interpreted and renegotiated against the backdrop of new and unpredictable situations. Because of this, the philosophy they apply in research depends on the research question itself. Pragmatists often combine positivist and constructivist principles in the same research project, using both qualitative and quantitative methods to investigate different components of a

research problem. They believe that the optimal research methods are those that most successfully answer the research question.

In the case of current study, the researcher employed both positivist and constructivist paradigm. While most social science research operates from either a positivist or constructivist paradigm, it's possible to combine both, as the field of project management often does. Quantitative and qualitative methodology are frequently used together in project management fields, illustrating the subject's footing in multiple research paradigms (positivist and constructivist).

3.2.2 Research Design

The Research design defines the study type (descriptive, correlation, semi-experimental, experimental, review, meta-analytic) and sub-type (e.g., descriptive-longitudinal case study), research question, hypotheses, independent and dependent variables, experimental design, and, if applicable, data collection methods and a statistical analysis plan. Research design is the framework that has been created to seek answers to research questions. Many research designs could be used to study business problems (Hair et al., 2011). Different Scholars define research designing method, for example, Kitchin and Tate (2000), as the coherent set of rules and procedures which can be used to investigate a phenomena or situation, including the tools and techniques of data gathering and analysis. To select better appropriate method, the researcher has assessed key approaches, methods and sources used by various researchers. Depending on the way in which researchers ask their research questions and present their purpose, the research design could be classified into three groups, namely exploratory, descriptive and explanatory studies (Saunders et al., 2009).

Accordingly, to meet the objectives of this study explanatory and descriptive design approach was used, while exploring critical propositions and important study models recent efforts to re-conceptualize the project management field.

3.2.3 Research Approach

This study collects data by using a mixed approach, which substantially consists of both qualitative and quantitative approaches. The design of the study espoused to conduct this study is that of a case study approach. This design is because of the nature of the study and the data questions are designed in such a way to address the crucial issues in the perpetration of different causes of abandonment and failure in the case of Ayat Real Estate CMC Project. A case study analyses an in- depth study of a particular study

problem rather than taking a wide statistical check. It helps in narrowing down a broad field of the studye into one or to a more manageable researchable illustration.

The study uses a mixed approach i.e. both qualitative and quantitative approaches. According to the PCMH resource center, 2013 the term" mixed styles" refers to an imperative methodology of exploration that advances the methodical integration, or" mixing" of quantitative and qualitative data within a single disquisition or sustained program of inquiry. The introductory demesne of this methodology is that similar integration permits a more complete and synergistic application of data than do separate quantitative and qualitative data collection analysis. Mixed styles are especially useful in understanding contradictions between quantitative results and qualitative findings. It gives a voice to study actors and insure those study findings are predicated in actors' gests. It also has a great inflexibility and is adaptable to numerous study designs, similar as experimental studies and randomized trials, to interpret further information that can be attained in only quantitative study.

3.3 Data type and source

3.3.1 Data type

Data collection requires conducting certain procedure for further analysis. In this research, two main types of data was used to gather information, namely; Primary and secondary data

3.3.2. Data Source

The sources of data was collected from primary and secondary data. The most common primary data collection instrument is questionnaire. Questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents.

Primary data are first time collected in solving specific problems under study. Primary data was gathered using, questionnaires and interviews for the purpose of the study.

Secondary data are already in existence and have been collected previously for different purposes. Therefore, secondary data for this study was gathered through organization documents, journals, pamphlets, books and other sources concerning Auditor responsibility and fraud detection.

3.4. Sampling Design

3.4.1 Population and Sampling Frame

The Ayat Real Estate CMC Project construction design has a total number of 23 professionals working there (banning the labor workers). And the data is collected through the help and backing of the HR department of the Ayat Real EstateS.C inventors

Table 1. Respondents' distribution in the professionals of the projects

Description	Number of employees (only professionals)	Proportional sample size of the clusters
Consultant	15	15
Contractor	5	5
Project Manager	2	2
Head Architect	1	1
Total	23	23

3.4.2 Sampling unit

The study set up it to be delicate to cover the entire population in the exploration. Saunders, etal.,(2007) contends that "sampling provides a valid volition to a tale when it would be inoperable to survey the entire population; you have budget and time constraints or have collected all the data but need the results snappily. Writing about why we need to test, Miller (2003) points out two major reasons. The first reason is that sampling minimizes the cost of collecting data. Similar cost, according to them, can be in terms of time, and energy. The alternate reason is that it increases rigor in the data collected. Therefore, taking into consideration that it's delicate to assess and examine the causes of construction abandonment and failures in all the constructions held in Addis Ababa. It was more realistic to choose one case, the construction of Ayat Real Estate CMC Project. Consequently, this exploration relies upon on non-probability sampling technique. Of this type of slice, a intentional sampling technique was used to elect the specific center. The sampling unit for the study are groups in this study are the adviser, the contractor, and the customer.

3.4.3. Sample Size determination

The total numbers of participants were 20 questionnaire respondents and 3 interviewees. Due to small number of total population the researcher was selected 20 employees and 3 interviewers as a sample size. Hence, researcher selected all employees as sample size,

no need of sampling technique was used to selected participants with the minimum sample size required. Therefore, total sample size was the summation of all samples from the sampling population. Thus, n= 20+3=23. The contingency was intended to reduce the effects of non- founds, non-willing, non-responds and misses on the desired data sources.

3.4.4 Sampling procedure

According to explorable.com (2009), "non-probability sampling is a sampling technique where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected. A true random sampling is always difficult to achieve". Most researchers are bounded by time, money, and workforce and because of these limitations, it's almost impossible to randomly sample the entire population and it is often necessary to employ another sampling technique, i.e. the non-probability sampling technique.

"Critical case sampling is a purposive sampling in which just one case is chosen for study because the researcher expects that studying it will reveal insights that can be applied to other like cases" (Ashely Crossman, 2017).

This being said, the researcher used is the judgmental/ purposive sampling technique, because the population is limited to one case and the number of expertise in the area is on a smaller group to a specific field. This research studies about the causes of construction abandonment and failure: the case of Ayat Real Estate CMC Project and provide a necessary solution and recommendation on the causes of the problem and serve as a future reference for upcoming construction projects.

3.5. Data Collection instruments

The researcher was employed the collection of both primary and secondary data to address research questions. Both structured questioners and semi-structured interviews were used together as primary data to generate all the necessary information from different respondents of the area. As secondary sources, different published materials including archived documents were examined to get a better understanding of the area under investigation.

The questionnaire is designed to gain farther information to support the study objects and also to identify the main sub-factors that beget the abandonment and failure in construction systems in the case of Ayat Real Estate CMC Project construction design.

It can also be used for farther aiding the construction business in Addis Ababa on relating the root causes of abandonment and failure in the construction sector and propose a result or recommendation in prostrating or dwindling the problem from being in unborn systems. The experimenter collected data by distributing questionnaires to the adviser, contractor, and the customer of this design. The questionnaire consists of five runners and was developed as a study tool for this study and it of unrestricted questions. The interview is conducted from a direct discussion and through phone between the interviewer and the interviewees. The interviews were conducted with the customer, the head mastermind, the design director and the contractor. The interview questions comported of unrestricted and open concluded questions. This study depends on data and professional opinions.

Secondary data is attained from published documents like browsers, and other related reports that was searched using websites and other sources of information accessible via the information technology.

3.6. Data Validity and Reliability

3.6.1 Data Reliability

According to Zikmund (2003) "reliability is defined as the degree to which measures are free from errors and therefore provide consistent results. Cronbach's alpha a reliability measure designed by Lee Cronbach in 1951 is a coefficient of reliability used to measure the internal consistency of a scale; it has a maximum value of 1. Values closer to 1 reflect a stronger relationship between the test items". Tests with low Alpha's would indicate that there was a little similarity of responses (Tavakol and Dennick, 2011).

To fulfill the purpose of the current research 15 questionnaires were distributed, and all were returned, leading to a 100 % response rate. After checking the filled questionnaires to evaluate the suitability, it was coded with SPSS for further analysis. The reliability of the data has been checked with Cronbach's Alpha and the result is indicated in table 4.21 Of the discussion part.

3.6.2 Data Validity

"To insure the validity of the study appropriate and acceptable standards were applied. The questionnaires used for this purpose of study are from previous research done on a similar topic; seven causes of project failure: how to recognize them and how to initiate project recovery" Discenza, R. & Forman, J. B. (2007).

3.7. Method of Data Analysis

The data collected was anatomized and presented to enable the experimenter to answer the study questions and meet the ideal of the study from which a conclusion and recommendations were drawn.

3.7.1 Method of quantitative data Analysis

The quantitative data were analyzed and presented by SPSS. For the method of this study to understand the data duly, the data was reduced to a manageable size and was analyzed using categorization support finding of the quantitative result. The quantitative data analysis for the study involved descriptive statistics to analyze the data and test the research hypothesis or questions. In the analysis of the descriptive statistics, the mean, standard deviation, maximum and minimum values used to analyze the trends and describe the variables to be used in the study in terms of trends and variation among the cross-section. The analysis is grounded on the statement of the problem, exploration ideal, and exploration questions.

3.7.2 Method of quantitative data Analysis

The qualitative data was analyzed by using thematic and content analysis methods, the qualitative data analysis tools. As the SPSS is the conventional data analysis tool for statistical or quantitative data, percentage, frequency and the likes were used to analyze the quantitative data so that a conclusion could be reached about the case and recommendation could be drawn as well.

Specifically, the first part of the study uses thematic and content analysis to analyze the qualitative data.

Thematic Analysis: Bryman, (2012) defines thematic data analysis as “a category identified by the analyst through his/her data; that relates to his/her research focus (and quite possibly the research question); that builds on codes identified in transcript and/or field notes; and that provides the researcher with the basis for theoretical understanding of his or her data that can make a theoretical contribution to the literature relating to the research focus”.

3.8. Ethical Considerations

During the study the participants were not subjected to any harm in any way. Respect for the dignity for the respondents is prioritized with a full consent for respondents are given prior to the study. The privacy and confidentiality are kept.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1. Introduction

This chapter is structured according to the research questionnaires and discusses the interview questions conducted and the results were collected from all 20 participants, 15 of which questionnaires were distributed to the consultant and the contractor and additional interviews were recorded with some of the necessary staff working at the Ayat Real Estate CMC Project Construction project involved. 5 of the respondents come from the customer side and were interviewed by telephone. Of these 15 questionnaires distributed, 10 respondents were from Savior Consult Architect & Engineers PLC, i.e. H. Managing Directors of Savior Consult Architect & Engineers PLC, Architects, Consultants, Electrical Engineers, Mechanical Engineers, Project Managers, Project Assistants, Civil Engineers, Plumbing Engineers, and Volumetric Engineers. The remaining 5 respondents were from the contractor, Ayat Real Estate S.C., the civil engineers, project managers and civil engineer of the construction project of the Ayat Real Estate CMC project.

Since the researcher used both qualitative and quantitative methods, this chapter is divided into two sections. The first deals with the results of the quantitative research, which consists of four parts.

The first part deals with the organizational profiles. The second part and the third part are designed to identify and rank the most common causes and sub-factors that cause construction project abandonment and failure in the case of Ayat Real Estate CMC project. The last part covers the general questions related to the reasons for construction project abandonment and failure in case of Ayat Real Estate CMC Project Construction project.

The second section deals with the qualitative research results obtained from interview questions between the consultant, contractor and client. In this section, the researcher discusses the objectives of the project, the tools and techniques used, the assignment of project managers, the identification of the client's needs and requirements, the project performance criteria, senior management's criteria, the initial estimated time to complete the project, the Order of work to be done, estimate of resources required to complete the work, financial resources of the project, timing of work to be done, initial project timeline, preparation of a risk management plan, documentation of the project plan, plan for managing communications with stakeholders, and challenges .Finally discussed the

researcher about the results of that research, whether or not the results agree with previous claims of theories.

4.2. Quantitative Analysis

4.2.1. Organizational profile

This part consists of the general information collected about the respondents in terms of positions, years of experience, qualification, institute type and project types that their organization deals with.

Table 2.Profiles of respondents

	Description	Frequency #	Percent %
Position	Consultant	10	66.6
	Contractor	3	20
	Project Manager	1	6.7
	Head Architect	1	6.7
Years of experience	1 to 5 years	1	6.7
	5 to 10 years	5	33.3
	10 to 15 years	4	26.7
	15 to 20 years	5	33.3
Qualification	MSc/MA	4	26.7
	BSc	10	66.6
	Diploma	1	6.7
Institution type	Private sector	15	100
Types of projects held in organization	Building	24	100

Source: own (Feb, 2023)

Table 2 shows the frequency and percentage of respondents. It shows that out of 15 respondents, 1 at 6.7% was the lead architect, 1 at 6.7% was the project manager, 3 at 207% was the contractor and 10 at 66.6% was the consultant, making them the largest respondent groups in the study. Five sub-categories are listed under the long-term experience of the respondents. Table 2 shows that of the 15 respondents, 1 of them had an experience of 1 to 5 years with 6.7%, 5 of them had an experience of 5 to 10 years with 33.3%, 4 of them had an experience of 1 to 5 years had 10 to 15 years with 26.7% and 5 of them had experiences between 15 and 20 years with 33.3%. Here it can be seen that respondents with an experience in the range of 5 to 10 years and 15 to 20 years have the highest percentage, followed by the 10 to 15 years of experience and finally the 1 to 5 years. Table 2 of the respondents' under qualification shows that the majority of respondents, i.e. with a frequency of 10 and 66.6% have a BSc degree, followed by MSc/MA with a frequency of 4 and 26.7% and finally a diploma with 6.7%. All respondents are employed in a private institution and the type of projects

were held by buildings

4.2.2. Major causes of construction project abandonment and failure

This part discusses the results obtained from the participants on the main causes of dropout and failure. In this part, the causes are divided into five groups: client-related causes, consultant-related causes, contractor-related causes, order-related causes, time and budget-related causes

Table 3: causes of construction project abandonment and failure

Items	Level of agreement with their weight								
	Medium		High		Very High		Total		Majority
	F	%	F	%	F	%	F	%	
Client Related Causes	0	0	3	20	12	80	15	100	Very High 80%
Consultant related Causes	2	13.3	10	66.7	3	20	15	100	High 66.7%
Contractor related Causes	3	20	8	53.3	4	26.7	15	100	High 53.3 %
Time and Budget related Causes	1	6.7	3	20	11	73.3	15	100	Very High 73.3%
External Factors related Causes	1	6.7	11	6.7	13	86.6	15	100	Very High

Source: own (Feb, 2023)

The result of this study provides an indication of the frequency, the rank of the main groups that the task and the failure of the Ayat Real Estate CMC Project construction project in Addis Ababa. Table 3 shows a summary of the frequency and percentage reported by all respondents. Table 3 shows that, according to respondents, of the five main factors that cause the construction abandonment and construction project failure of Ayat Real Estate CMC project, causes are related to external factors, followed by customer, then time and budget. The consultant and the contractor had the percentages 86.6, 80%, 73.3%, 66.7% and 53.3%, respectively. From this it can be concluded that causes related to the customer led to construction failure and construction abandonment of Ayat Real Estate CMC Project by 80%.

4.2.3. Other causes of construction project abandonment and failure

This part discusses the sub-factors that are causes of abandonment and failure of construction projects, i.e. The sub-factors in each group that affect the cause of abandonment and failure, there are five sub-factors that are listed: Customer's reputation, Customer's trust in other parties, Flexibility to change and variation, Customer's financial capacity, Degree the desired customer participation

Table 4 Descriptive Statistics of factors related to client

	N	Mean	Std. Deviation
Client's reputation	15	3.00	.895
Client's trust	15	4.00	.600
Flexibility to changes and Variation	15	2.04	.282
Client Financial Capability	15	3.70	.688
Desired Involvement	15	3.09	.380
Total Valid value	15	**3.166**	

Source: own (Feb, 2023)

Factors summarized from table 4 related to customer causality for abandonment and construction project failure at Ayat Real Estate CMC project, Addis Ababa. This indicates that all entered data is valid and missing data will not be displayed. The above table 4 concludes that among the factors related to the customer, customer confidence is reported with a mean of 4.00, followed by customer financial capability with a mean of 3.70, and customers' desired participation a mean of 3.09, the customer's reputation with a mean of 3.00 and the customer's flexibility to change 2.04.- The level of desired customer involvement

Table 5: Factors related to client

Items	**Level of agreement with their weight**								
	Medium		High		Low		Very low		Majority
	F	%	F	%	F	%	F	%	
Client's reputation	15	100	0	0	0	0	0	0	Medium 100%
Client's trust	0	0	15	100	0	0	0	0	High 100%
Flexibility to changes	0	0	0	0	15	100	0	0	Low 100%

and variation									
Client Financial Capability	5	33.3	10	66.7	0	0	0	0	High 66.7%
Degree of desired involvement	8	53.3	3	20	3	20	1	6.7	High 53.3%

Source: own (Feb, 2023)

Table 5 has five sub-categories under and shows the frequency, repliers and has ranked the results of the repliers. The first sub order indicates all the repliers indicate that customer's character has a medium cause of 100. The alternate sub order repliers' customer trust which all repliers have a high cause of 100. The third sub order indicates that the inflexibility of change and variation with a medium cause of 100. So, it can be concluded that all the repliers believe that sub factors related to customer's character, customer's trust and customer's inflexibility to change and variation is with medium, high and medium sub factors under the causes related to customer of a construction design abandonment and failure independently. The repliers responded with a high cause of 66.7 to the fourth sub order guests' fiscal capability. The fifth order is about the asked involvement of customer in the design. Then the repliers responded with a high cause of 53.3.

4.2.3. Factors related to consultant

Table 6: Factors related to consultant

	N	**Mean**	**Std. Deviation**
Trust in consultant	15	4.00	.858
Qualified personnel	15	4.26	.827
Performance capability	15	4.00	.989
Reputation in finishing in time & budget	15	3.78	.905
Communication b/n project team & client	15	4.00	.958
Client requirement clearly defined	15	4.26	.977
Realistic cost schedule	15	3.70	1.044
Realistic project Schedule	15	3.70	1.186
Support from client	15	3.48	1.179
Project completion Defined	15	4.00	1.185
Total		**3.57**	**1.082**

Source: Own Survey, 2023

From table 6 epitomized the sub factors that are related to the adviser in the causes of abandonment and failure of the Ayat Real Estate CMC Project construction design held in Addis Ababa. It's indicated that all the data entered are valid and no missing data shown. From the below table's information it can be concluded that under the sub factors related with the adviser the bone's with the loftiest mean are the good labor force and customer demand easily defined with 4.26, followed by trust in the adviser , performance capability, trust in adviser , communication b/ n design platoon & customer and defined design completion time with a mean of 4.00 each, character in finishing in time and budget with each having a mean of3.78, realistic cost schedule and realistic design schedule each with a mean of3.70, and eventually support form customer with a mean of 3.48.

Table 7. Frequency, Sub factors related to consultant

Items	Measurement	Freq #	%	Rank	
Trust in consultant	High	15	100	1	High 100%
	Total	15	100		
Qualified personnel	High	10	66.6	1	High 66.6%
	Very High	5	33.3	2	
	Total	15	100		
Performance capability	High	15	100	1	High 100%
	Total	15	100		
	Medium	3	20	2	High 80%
Reputation in finishing in time & budget	High	12	80	1	High 80%
	Total	15	100		
Communication between project team & client	High	15	100	1	High 100%
	Total	15	100		
Client requirement clearly defined	High	11	73.3	1	High 73.3%
	Very High	4	26.7	2	
	Total	15	100		
Realistic cost schedule	Medium	11	73.3	1	Medium 73.3%
	High	4	26.7	2	
	Total	15	100		
Realistic project schedule	Medium	3	20	2	High 80%
	High	12	80	1	
	Total	15	100		
Support from client	Medium	8	53.3	1	Medium 53.3%
	High	7	46.7	2	
	Total	15	100		

Project completion Defined	High	15	100	1	High 100%
	Total	15	100		

Source: own source (Feb, 2023)

Table 7 have ten sub orders under and shows the frequency, repliers and has ranked the results of the repliers. The first sub order indicates all the repliers indicate that customer's trust in the adviser has a high cause with 100. The alternate sub order of vacuity of good labor force of high cause with 66.6, third one a performance capability is of high cause with 100, fourth sub order character in finishing with budget and time is of high cause of 80, fifth sub order effective communication between design platoon and customer is of high cause with 100, the sixth sub order customer demand easily defined is of high cause with 73.3, the seventh sub order realistic cost schedule of medium cause with 73.3, the eighth sub order realistic design schedule of high cause with 80, the ninth sub order support from customer during the design performance is of medium cause with 53.3 and the final sun order completion of design easily defined is of high cause with 100..

Factors related to Contractor

Table 8. Factors related to Contractor

	N	Mean	Std. Deviation
Consultant trust on contractor from reputation	15	4.26	.658
Contractor's qualified personnel	15	4.00	.727
Contractor's performance Capability	15	4.00	.889
Reputation in finishing with given time and budget	15	3.70	.805
Effective communication between consultant & contractor	15	3.83	.658
Realistic project schedule with resource availability and other	15	3.70	.977
Project completion clearly defined and communicated	15	4.00	1.044

Source: own (June, 2023)

From table 8 summarized the sub factors that are related to the contractor in the causes of abandonment and failure of the Ayat Real Estate CMC Project construction project in Addis Ababa. It is indicated that all the data entered are valid and that there are no missing data shown. From the above table's information it can be concluded that under the sub factors related with the consultant, consultant trust in the contractor from reputation is the highest mean with 4.26, followed by contractor's qualified personnel, Contractor's performance capability, and project completion clearly defined and

communicated each with a mean of 4.0. Effective communication between consultant & contractor is with mean 3.83. Reputation in finishing with given time and budget and realistic project schedule with resource availability and other factors with a mean of 3.70.

Table 9. Frequency, Sub factors related to contractor

Sub-factors	Degree	Frequency #		Percent %	Rank	
Consultant trust on contractor from reputation	High	11		73.9	1	High 73.9%
	Very High	4		26.1	2	
	Total	15		100		
Contractor's qualified personnel	High	15		100	1	High 100%
	Total	15		100		
Contractor's performance capability	High	15		100	1	High 100%
	Total	15		100		
Reputation in finishing with given time and Budget	Medium	5		30.4	2	High 69.6%
	High	10		69.6	1	
	Total	15		100		
Effective communication between consultant & contractor	Medium	3		17.4	2	High 82.6%
	High	12		82.6	1	
	Total	15		100		
Realistic project schedule with resource availability and other	Medium	4		30.4	2	High 69.6%
	High	11		69.6	1	
	Total	15		100		
Project completion clearly defined and communicated	High	15		100	1	High 100%
	Total	15		100		

Source: own (June, 2022)

Table 9 have seven sub orders under and shows the frequency, repliers and has ranked the results of the repliers. The first sub orders all the repliers responded adviser trust on contractor from character has a high cause with73.9. The alternate sub order of contractor's good labor force of high cause with 100, third one a performance capability is of high cause with 100, fourth sub order character in finishing with budget and time is of high cause of 69.6, fifth sub order effective communication

between adviser & contractor is of high cause with 82.6, the sixth sub order realistic design schedule with resource vacuity and other is of high cause with 69.9, and the seventh sub order design completion easily defined and communicated high cause with 100.

Factors related to External environmental factors

Table 10. Frequency Statistics, sub factors related to external environment

	N	Mean
Degree of complexity of Project	15	4.00
Governmental construction policy	15	4.04
Economic conditions	15	3.83
Other party involvement	15	3.48
Legal issues	15	2.83
Material availability	15	3.39
Workers condition	15	2.30
Average mean		**3.552**

Source: Own (Feb, 2023)

From table 10 concluded the sub factors that are related to external environmental factors that are causes of abandonment and failure of the Ayat Real Estate CMC Project construction design in Addis Ababa. It's indicated that all the data entered are valid and that there are no missing data shown. From the below table's information, it can be concluded that under the sub factors related with external terrain, governmental construction policy is with the loftiest mean 4.04, followed by the degree of complexity of design with a min of 4.00, material vacuity with a mean of3.39, profitable condition with a mean of3.83, other party involvement with a mean of3.48, material vacuity with a mean of3.39, legal issues with a mean of2.83 and workers condition with2.30.

Table 11. Frequency, sub factors related to external environment

Sub-factors	Degree	Frequency #	Percent %	Rank	
Degree of complexity of projects	High	15	100	1	High 100%
	Total	15	100		
Governmental construction policy	Medium	3	20	3	High 53.3%
	High	8	53.3	1	
	Very High	4	26.7	2	
	Total	15	100		
Economic conditions	Medium	2	13.3	2	High 82.7%
	High	13	82.7	1	
	Total	15	100		

Other party involvement	Low	2	13.3	3	High 46.7%
	Medium	6	40	2	
	High	7	46.7	1	
	Total	15	100		
Legal Issues	Low	3	20	2	Medium 53.3%
	Medium	8	53.3	1	
	High	4	26.7	3	
	Total	15	100		
Material Availability	Medium	10	66.7	1	Medium 66.7%
	High	5	33.3	2	
	Total	15	100		
Workforce condition	Low	12	80	1	Low 80%
	Medium	3	20	2	
	Total	15	100		

Source: own (Feb, 2023)

Table 11 have seven sub categories under external environmental factors and shows the frequency, respondents and has ranked the results of the respondents. The first sub category all the respondents responded on the degree of complexity of project with high with 100%. The second sub category of governmental construction policy has a high with 53.3%, third sub category economic conditions is with high with 82.7%, the fourth condition that is other party involvement is high with 46.7%, the fifth sub factor legal issues is medium with 53.3%, the sixth factor related to material availability was medium at 66.7% and finally the sub factor workforce condition is of low with 80%.

Factors related to time and budget

Table 12. Frequency Statistics, sub factors related with time and budget

	Valid	**Missing**	**Min**	**Max**	**Mean**
Speed	15	0	3	4	3.78
Time and budget Constraints	15	0	3	5	4.00
Delays obtaining environmental approval	15	0	2	4	3.61
Time and cost control	15	0	3	5	4.04
Price certainty prior to Commencement	15	0	4	5	4.48

Average mean	**3.982**

Source: own source (Feb, 2023)

From table 12 summarized the five sub factors that are related to time and budget that caused the abandonment and failure of the Ayat Real Estate CMC Project construction project in Addis Ababa. It is indicated that all the data entered are valid and that there are no missing data shown. From the above table's information it can be concluded that under the sub factors related with time and budget, price certainty prior to commencement is with the highest mean 4.48, followed by time and cost control with mean 4.04. Time and budget constraints are of mean 4.00, speed is with mean 3.78 and delays obtaining environmental approval is with 3.61 mean.

Table 13. Frequency, sub factors related with time and budget

Sub-factors	Degree	Frequency #	Percent %	Rank	
Speed	Medium	4	26.7	2	High 73.3%
	High	11	73.3	1	
	Total	15	100		
Time and budget constraints	Medium	3	20	2	High 66.7%
	High	10	66.7	1	
	Very High	2	13.3	2	
	Total	15	100		
Delays obtaining environmental approval	Low	1	6.7	3	High 66.7%
	Medium	4	66.7	2	
	High	10	66.7	1	
	Total	15	100		
Time and cost control	Medium	2	13.3	3	High 66.7%
	High	10	66.7	1	
	Very High	3	20	2	
	Total	15	100		
Price certainty prior to commencement	High	8	53.3	1	High 53.3%
	Medium	7	46.6	2	
	Total	15	100		

Source: own source (Feb, 2023)

Table 13 have five sub categories under factors related with time and budget and shows the frequency, respondents and has ranked the results of the respondents. The first sub category speed respondents responded of high with 73.3%. The second sub category of time and budget constraints is with cause high 66.7%, third sub category delays obtaining environmental approval is with cause of high 66.7%, fourth sub category time and cost control is with a high 66.7% and the final sub factor price certainty prior to commencement is of high with 53.3%.

4.3. General questions regarding the causes of abandonment and failure

This part discusses about the general scenarios, of the organization culture and construction process, issues that mostly occur when dealing with a building construction project, and general professional opinion of the respondents on the causes of abandonment and failure of a construction project.

Table 14. General questions regarding causes of abandonment and failure

	Description	Frequency #	Percentage %
Satisfaction about the construction process and culture of your Organization	Yes	10	66.7
	No	5	33.3
Commonly faced issues during a building construction project in your organization	Planning issue	4	26.7
	Time and Financial issue	7	46.7
	Communication with client issue	1	6.6
	Legal and governmental policy issues	3	20
Common issues faced during the construction project Ayat Real Estate CMC Project	Planning issue	2	13.3
	Time and Financial issue	5	33.3
	Communication with client issue	1	6.7
	Legal and governmental policy issues	7	46.7
Major causes of abandonment and failure of a project (professional opinion)	Planning issue	4	26.7
	Time and Financial issue	6	40
	Communication with client issue	3	20

	Legal and governmental policy issues	2	13.3

Source: own (Feb, 2023)

Table 14 shows that out of 15 repliers66.7 are satisfied about the construction process and culture of their association. The other 33.3 of the repliers indicate that they aren't satisfied about the construction process and culture of their association. Out of 15 repliers 46.7 have responded indicating that time and fiscal issues are the issues that they generally facing during a structure construction design in their organization., followed by planning issues with 26.7, legal and governmental issues with 20 and communication with customer issues with6.6 Out of 15 repliers 46.6 responded that legal and governmental issues is the major issue faced during the construction design of Ayat Real Estate CMC Project, followed by time and fiscal issues at 33.3, also planning issues at 13.3 and eventually communication with customer issues were at 6.7. Out of 15 repliers 40 responded by indicating that time and fiscal issues are the major causes of abandonment and failure of a construction design in their professional opinion, followed by planning issues with 26.7, communication with customer issue with 20 and legal and governmental policy issues with 13.3

4.3 Reliability Analysis

Cronbach's alpha is a technique used for this study to access the reliability for the measurement of each competency component. Cronbach's alpha is a coefficient that is used to measure reliability or internal consistency of items; it indicates how closely the items are related to each other, and how free they are from bias (Tavakol and Dennick, 2011). If Cronbach's alpha value is more than 70% for all variables, then reliability is assumed. (Samuel, 2019). The reliability test results are reflected in Table 15.

Table 15. Reliability statistics Cronbach's Alpha coefficient

Reliability Statistics	
Cronbach's Alpha	No. items
.869	30

Source: own source (June, 2020)

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

4.4 Qualitative Analysis

In Addis Ababa, there's a high demand of construction systems for the megacity being the capital of Ethiopia and Africa. Besides it also being the home of numerous transnational associations. And the government also is opening up vast openings towards the construction sector since it plays a great part in the frugality of the nation especially for a country like Ethiopia distributed as a third world

country. According to ministry of civic development and construction, the Construction assiduity policy of Ethiopia(July 2012), the construction assiduity is the major sector where public and private sectors are investing huge quantum of fund. The chance share of the construction sector to GDP at constant introductory price has increased from4.3 in 1993E.C to5.8 by 2002E.C. Ethiopia has promising openings with this fast pace growing rate of frugality and facing the abandonment and failure of systems will only pull back from reaching the thing that the country has appointed by the coming decade.

The main objective of the project is to add to a business value to the organization and to participate in the growth of the organization and nationwide. The specific objectives include: building and operating a 4star hotel in Addis Ababa, contribute to the development of construction industry in Ethiopia, generate employment opportunity, adding a bossiness value to the organization

The residency rate reported in Addis Ababa and also in other corridor of Ethiopia points towards a competitive need for a good construction. The decision to invest in the hostel business on Addis Ababa by the possessors is inspired by the vacuity of request openings for hostel development. The demand of the construction structure design assiduity is with a high demand for original and transnational guests and developments to be accommodated and being finished within the conditions set by the guests and the other affiliated policy.

“The project management is divided into three and each had their own project manager. The client, the consultant and the contractor. On the client’s side the managers were selected based on favoritism i.e. from friends, relatives, or people that they have a previous history with. The consultants were selected through the recommendation due to their good name, good work and talents. Construction Bid was held to select the contractor”.

“To identify the true needs of the client, a feasibility study was done to study the market that was conducted by the Consultant to give a better understanding of the hotel industry market in the city, then it was presented to the clients and was approved. In the market search, primary and secondary data were gathered on the hotel industry and the construction business in Addis Ababa. Interviews were conducted with Addis Ababa city administration culture and tourism bureau, public officials, and other stakeholders that gave their opinion on the trends and demands of the sector in Addis Ababa. The secondary data sources of vital information in the current construction sector and hotel business in the city were covered. Past trends in the arrival of international tourists in the country and foreign exchange earned from the sector were also examined. The consultant has been able to access the necessary information from the Addis Ababa city administration culture and

tourism bureau".

The next step, the client explained and prepared a document about the project for the consultant. The consultant tried to analyze and interpret the client's needs and prepared a design based on the necessary specifications and details. The building started on February, 2014 set to be finished in June, 2016. The project was recorded as abandoned and failed project by the organization in July, 2017.

"When conducting this project, a proper estimation for the project was made and all the required resources and equipment were all laid out. No trust and unity issue was occurring between the three parties (client, consultant, and contractor). The project schedule estimation was prepared after the consultant was selected. The consultant submitted a project schedule to the client, the client reviewed the plan and approved and acted accordingly to some extinct. The project is to be financed by the client with an estimated birr 39.8 million birr of total contact agreement".

Sequencing of the project work to be done

"The consultant is mainly for designing, quantifying, and preparation of the specification document. For the project planning process, the consultant used the EBCS. The client specified the things that they want to incorporate in the design of the project with a similar format of a ToR to the consultant. Based on the client's specification the consultant developed a conceptual design that can satisfy the client's needs then puts the concept into a drawing, digital and physical 3D model for the client to have a clear picture of what is to be done. Then they discuss these concepts with the clients and see if they are on board with the idea and accept it. If so, then the next step would be to move to the preliminary design, which is a form of detailed design including detailed descriptions and cost of the project and will be presented to the client".

"The client then reviews the preliminary design, and if satisfied the projects move to the next step if not modifications will be done by the consultant and be reviewed again by the client".

"After the approval of the preliminary design, the consultant moves to a design development stage where construction documentation is established. At this stage, the client has less of a say unless and otherwise there comes a case where there needs to be a modification in the design of the project. This document is a full detailed document that includes the specification and detail drawings of the project. It includes all the necessary

information about the project which includes design, support engineering documents, BoQ, and other necessary special details. This is a document that will be ready for bidding".

"The bidding process is the next stage. Based on the specifications laid out by the consultant on the specification document, contractors will review the document and set their price and submit it to the consultant. After dealing with the legal issues with construction permit from the municipality, the best contractor for the job is selected after reviews are done on the technical and financial report submitted by the contractors. After the project is handed to the contractor, consultants will check if the project work is being done and work with the contractor for the project to be completed with the given time and budget until the project is finished and handed over to the client".

Preparation of risk management plan

There were no proper/ formal risk management plan done by any of the parties involved in the project. Whenever unexpected events occur they just discuss amongst themselves and solve it, or take a measures by themselves without discussing with all the necessary professionals and this sometimes caused problem on the project.

Documentation of project plan

It can be said that documentations of the Ayat Real Estate CMC Project construction project have been documented properly by all parties, i.e. the client, the consultant and the contractor.

Communication with client planning

"The contractor directly reported to the consultant monthly, weekly, and daily (when necessary). The consultants monitored the contractors and reviewed the reports that they received from the contractors and report back to the client by preparing a proper document and update the client on the progress of the project. Site visits are made to monitor the project performance. The consultant presents a report on a monthly or weekly basis based on the importance and has meetings every week as needed to follow up on the project. The consultant's report includes; financial reports so the client can understand whether the project is going per schedule and cost".

Challenges

"Most of the challenges that were faced by the consultant and the contractor are the legal and governmental policy issues. Because of the change in the building height regulation that was issued after the project has been launched, major changes had to be made which

held the project and go out of schedule. In order to go by the new height regulation, design modifications had to be done and with that redesigned project building sacrifices had to be made to the requirements of the clients' initial ToR. Going through the permitting process and necessary amendments according to the new regulations created the gap of client satisfaction and also a loss on the consultant and the contractor's initial cost and time. Aside from the legal and governmental policy issues, the USD component was also playing a great role in delaying the construction project which in return made an investment failure to all parties (client, consultant, and contractor). The project has completed 25%-30% of the agreed-upon design before the change of height regulation occurred".

"A meeting was organized by the consultant to discuss the issues regarding with the government's new regulation between the client and the project team of the consultant. The consultant offered to re-design the building project based on the newly added regulation on the existing phase of the project, but the client was not willing to make an additional payment for the redesign and a gap was created, which then finally the consultant was forced to stop the Ayat Real Estate CMC Project construction project and recoded it as an abandoned and failed project".

4.5 Discussion

As indicated in table 13, the Cronbach's nascence test reveals that the instrument's internal thickness as 86. 9 which is well above the respectable value (i.e. 70). thus, the exploration instrument is dependable, and the forthcoming findings & conclusions are respectable and concrete. This section deals with the analysis and interpretation of data collected from the questionnaires. Responses are epitomized and presented using tables to grease easy understanding. Generally, repliers were asked to rate 43 major causes and sub- factors that led the construction design to fail and be abandoned linked from the literature review and from former exploration done on the failure of a design. This involved the use of a five-point scale, gauging 1 for veritably high to 5 veritably low. A mean item score was used to rank the major causes of abandonment and failure of this particular construction design. Grounded on the exploration conducted, i.e. the interview and the questionnaire, the experimenter was suitable to understand that among the five factors that causes of a construction abandonment and failure in the case of Ayat Real Estate CMC Project construction design, the major factor was Legal and governmental policy issues. And because of the gap a lot of issues arise like planning issues and backing issues. analogous challenges were also observed in "Abandonment of Construction systems in Nigeria Causes and goods" which was conducted by Ayodele Elijah Olusegun and Alabi Olumuyiwa Michael. The exploration illustrates how inadequate planning has

been linked as one of the causes of design abandonment; this is in agreement with Essenwa(2004) and Adedeji(1998) and Opara(1986) who were of the opinion that acceptable design planning proceeds construction work if it isn't to be abandoned along the way. Another cause of abandonment of project is inadequate backing/ finance. This is in consonance with the protestation of Odenyinka and Yusuf (1997) that proprietor's cash inflow problem is a major factor responsible for abandonment of design. In the literature review, chapter two, according to ministry of civic development and construction, the construction assiduity policy of Ethiopia states that Weak and non-facilitative programs and nonsupervisory frame is one of the constraints that hampers the performance and development of the assiduity. For this design, adviser followed a typical structure construction process by first preparing documents for biding and concession, awarding the named a contractor and start the construction design. But since there were legal and governmental issues that passed while executing the design and that demanded a modification of the design which the adviser was willing to do but the customer wasn't willing to pay for the construction design to continue.

CHAPTER FIVE: CONCLUSIONS & RECOMMENDATIONS

5.1. Conclusion

Based on the information gathered from the interview and questionnaires the following conclusions are drawn.

- According to the finding on the study was conclude that the commonly faced challenges in causes of construction project abandonment and failure in the case of Ayat Real Estate CMC Project construction project is the legal and governmental policy issues, which can lead to planning issues, financial and time issues.
- A total of 34 sub-causes causing a project to be abandoned and fail were synthesized under 5 main groups, i.e. causes related to the client, causes related to the consultant, causes related to contractor, causes related to external environment and causes related with time and budget. Data was collected from relevant parties involved in the Ayat Real Estate CMC Project construction project. The findings from the study shows that our of 5 main causes the most issue that caused the abandonment and failure of the project is causes related to external environment, followed by causes related with the client, causes related with time and budget, causes related to consultant, and lastly causes related to contractor. Causes related to External environment = 86.6%, causes related to client = 80%, causes related to time and budget = 73.3%, causes related to consultant = 66.7%, causes related to contractor = 53.3%
- As shown in causes related to external environment, seven sub-causes were listed. Out of which all of them scored above 50%. From the questionnaire that was distributed, the respondents responded saying that the degree of complexity of a project has a high cause in leading a project to be abandoned and fail followed by economic conditions, legal issues, government construction policy, material availability, work force condition and other party involvement.
- Based on the findings causes related to client, five sub-causes were listed. Out of which four of them scored above 50%. The client trust and financial capability have a high score that the respondents believed it was the cause of the project of abandonment and failure.
- Under factors related to time and budget, there are five sub-causes listed. The highest scorers are time &budget constraint, speed, time &cost control and delays obtaining environmental approval.
- Under factors related to consultant, there are ten sub-causes where respondents identified client's trust in consultant, performance capability and communication between client and project team, and project completion clearly defined are that scored the highest.
- Under factors related with the contractor, there are seven sub-causes where respondents identified contractor qualified personnel, performance capability and project completion communicated are the highest scores.
- When conducting the research, the researcher was able to conclude that there weren't much of the two

parties being the major cause of abandonment and failure but the external environmental causes and the causes related with the client are the major factors.

- The result gives an indication of that more than 75% of the respondents are happy about the construction process and culture of their organization.

5.2. Recommendation

The recommendations for this research are:

- The researcher observed in order to decrease/eliminate the causes of construction abandonment and failure, governmental policies and regulations should be made by studying the effect that it can cause to the ongoing projects.
- Clients should be open to necessary amendments for the issues that are raised because of the external factors.
- Client should undertake an adequate of financial planning for the project at the beginning and that should be enough finance available based on a reliable estimate made by a professional.
- Consultant should prepare a risk management plan or legal mechanism in order to avoid major losses that can ruin the reputation of their organization.
- The government should put in all efforts to reduce inflation and review the USD currency shortage to the industry
- Previously started projects should not be compromised by new policies abandoned for their new idea.

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Appendix 1: Questionnaire (English)

Part one: General Information _ (Please circle the choice from the given letters).

1. Position, _____

   a. Consultant c. Project Manager

   b. Contractor d. Head Architect

2. Years of experience in the line of work, _____

   a. 1 to 5 years

   b. 5 to 10 years

   c. 10 to 15 years

   d. 15 to 20 years

   e. More than 20 years

3. Qualification, _____

   a. PhD

   b. MSc/MA

   c. BSc

   d. Diploma

4. Institution type, _____

   a. Governmental

   b. Non-governmental (NGO)

   c. Private

   d. International

5. Type of projects healed in the organization, _____

   a. Buildings

   b. Infrastructure

   c. Industrial

Part two: Main causes of construction project abandonment and failure in your organization.

*Please carefully identify the degree of causality of construction project abandonment and failure in your organization. (Please thick in the appropriate box).

- Very High Causal = 5
- High Causal = 4
- Medium Causal = 3
- Low Causal = 2
- Very Low Causal = 1

No.	Main Causes	Degree				
		Very high = 5	High = 4	Medium = 3	Low = 2	Very Low = 1
A	Factors related to the client					
B	Factors related to Consultant					
C	Factors related to contractor					
D	External environmental factor					
E	Factors related with time and budget					

Part three: Sub- Factors that are the causes of construction project failure and abandonment.

From your experience, please express your opinion on the causality of the following sub-factors for abandonment and failure of a construction project in the case of Ayat Real Estate CMC Project construction project. (Please thick in the appropriate box).

- Very High Causal = 5
- High Causal = 4
- Medium Causal = 3
- Low Causal = 2
- Very Low Causal = 1

No.	Main Causes	Degree				
		Very high = 5	High = 4	Medium = 3	Low = 2	Very Low = 1
A	**Factors related to the client**					
1	Client's reputation					
2	Client's trust in other parties					
3	Flexibility for changes and variations					
4	Client's financial capability					
5	The degree of desired client involvement					
B	**Factors related to Consultant**					
1	client trust on consultant from reputation					
2	Availability of qualified personnel					
3	Performance capability					
4	Reputation in finishing within a given time and budget					
5	Were communications between the project team					

	and stakeholders (client), frequent and effective?					
6	Were the customer requirements clearly communicated (or defined) before the project began (or at least before development or deployment of the solution began)?					
7	Were the initial project estimates (cost and schedule) complete and realistic, before performance began?					
8	Was the project schedule realistic considering the resource available and other important factors?					
9	During project performance, did the project receive interest and support form client?					
10	Was project completion clearly defined and communicated to the project team?					

C	**Factors related to contractor**					
1	Consultant trust on contractor's from reputation					
2	Availability of qualified personnel					
3	Contractor's Performance capability					
4	Reputation in finishing within a given time and budget					
5	Were communications between the consultant project team and contractor, frequent and effective					
6	Was the project schedule realistic considering the resource available and other important factors?					
7	Was project completion clearly defined and communicated to the					

	contractor?					
D	**External environmental factor**					
1	Degree of complexity of project					
2	Governmental construction policy					
3	Economic Conditions					
4	Other party involvement /role/ participation					
5	Legal issues					
6	Material Availability					
7	Workers Condition					
E	**Factors related with time and budget**					
1	Speed					
2	Time and cost constraints of project					
3	Delays obtaining environmental approval					
4	Time and cost control					

5	Price certainly prior to commencement					

Part four: General Information _ (Please circle the choice from the given letters).

1. Are you satisfied about the construction process and culture of your organization?

   a. Yes b. No

2. What kind of issues do you commonly face during a building construction project?
   a. Planning issues
   b. Time and Financial issues
   c. Communication with client issues
   d. Legal and Governmental policy issues
   e. Other

3. What are the most common issues that you faced during the construction of Ayat Real Estate CMC Project construction project?
   a. Planning issues
   b. Time and Financial issues
   c. Communication with client issues
   d. Legal and governmental policy issues
   e. Other

4. What do you think the major causes of the abandonment and failure of the project?
   a. Planning issues
   b. Time and Financial issues
   c. Legal and governmental policy issues
   d. Communication with client issues
   e. Other

Thank you for your cooperation!!

Researcher: Yeheyes Ayele

Annex 2: Interview (English)

Interview Questions

1. Summary about the Ayat Real Estate CMC Project construction project in Addis Ababa.

2. What kind of problems do you face in most construction projects?

3. What do you think are the major causes of abandonment and failure of a project?

4. What do you think made the Ayat Real Estate CMC Project construction project to be abandoned and fail?
5. What impact(s) did the project had made to the organization?

6. How do you describe the relationship that you had with the project owner?

7. In you belief, what kind of method(s) or improvement(s) can prevent/eliminate this kind of failures?
8. How did you identify the problems that can lead a project to abandonment and failure?
9. What made you decide to abandon the project?

10. What are the common gaps or problems observed in the construction business regarding project abandonment and failure?
11. What other losses did you face because of the abandonment of the project?

12. What challenges did you face with the contractor?

13. Did external factors play a great role in the abandonment and failure of the project?