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Study on Contractual Relationship between Main Contractors and Subcontractors and Their Impacts on Main Contractors' Competitiveness in 20/80 Bole Arabsa Condominiums

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DECLARATION

This is to certify that this thesis titled **''Study on Contractual Relationship between Main Contractors and Subcontractors and Their Impacts on Main Contractors' Competitiveness in 20/80 Bole Arabsa Condominiums''** is my original work being submitted in partial fulfilment for the award of the Master's Degree in Construction Technology and Management Stream of AAiT School of Graduate Studies Civil and Environmental Engineering. This thesis has not been submitted earlier either to this university or to any other university/Institution for the fulfilment of the requirement of a course of study.

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APPROVAL

As member of the board of examiners, we certify that we have read, evaluated the thesis prepared by **Yemsirach Sintayhu** and examined the candidate. We recommended that the thesis is accepted as fulfilling the thesis requirement for the degree of Master of Science with specialized in Construction Technology and Management Stream.

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ABBREVIATIONS

AAHDC=Addis Ababa Housing Development Corporation

AAHDCPO= Addis Ababa Housing Development Corporation Project Office

AAIT=Addis Ababa Institute of Technology

ASAP=Accelerated Subcontracting and Procuring

BC= Building Contractor

DEG =Deutsche Investitions- und Entwicklungsgesellschaft mbH, Cologne, Germany (Promoter of entrepreneurial development cooperation)

EHDA= Ethiopian Housing Development Agency

FIDIC=Federation Internationale des Ingenieurs Conseil

GC = General Contractor

GCC=General Conditions of Contract

GTZ- IS= Technical Cooperation- International Services

HCB = Hollow Concrete block

KfW= Kreditanstalt für Wiederaufbau, (German Reconstruction Credit Institute)

MSE=Micro and Small Enterprise

MoWUD = Ministry of Work and Urban development

MUDUC= Ministry of Urban Development, Housing and Construction

MV=Mean Value

PPA= Public Procurement Agency

SPSS=Statistical Package for Social Science

UN=United Nation

ABSTRACT

This study presents the current nature of main contractor and subcontractor contractual relationship and subcontractors impact on main contractors' compitatvness in Addis Ababa 20/80 condominium projects. The objective of this research is to identify the main criteria used by main contractors for selection of subcontractors and to study the nature of their contractual relationship with respect to coordination, payment practice and signed contract documents. In this study questionnaire survey, interview and literature review were used to collect relevant information.Using questionnaire survey the required data were collected form 48 main contractors, 43 nominated subcontractors, 36 domestic subcontractors, 4 consultants and 4 clients which are worked in (20/80) condominium projects found in Bole Arabsa site. For the interview 4 main contractors, 3 nominated subcontractors and 5 domestic sub contractors were participated.

The study found out that main contractors mainly focused on low price offer, good relationship, technical knowledge and past experience during selection of subcontractors.The main factors leading to relationship problems between the main contractor and subcontractor are: delay of payment and supplying materials, frequent absence of the main contractor from the site, lack of communication, lack of trust, multi-layer subcontracting, unavailability of written document, financial difficulties, misunderstanding on valuation work done, etc.

The study concludes that there is poor and harsh contractual relationship between main contractor and subcontractors and, the finding can assist in the improvement of the main contractor and subcontractor contractual relationship for successful construction project implementation in housing projects. It also recommends that in order to enhance the contractual relationship between both parties': skill, responsibility, integrity, trust, and communication application shall be improved.

Keywords: Construction projects, Main contractors, Sub-contractors, Relationship

CHAPTER ONE: OVERVIEW OF THE RESEARCH

1.1 Background of the study

There are many sectors which highly contributed to country's economic growth and the construction industry is one of them. It involves different parties, resource, equipment and machinery (Fah, 2006).

The fast growth of the construction industry resulted increase in the number of main contractor and subcontractors joining the industry. According to Yisan (2013) general or main contractors are responsible for managing the project and subcontractors are specialist agents, which are appointed by main contractors for the execution of a specific job and to overcome problems on the job site such as the need for special expertise, shortage in resources of the main contractor.

Main contractors are trying to improve their productivity by implementing subcontracting practice, which can reduce some activities in the construction process with the transfer of a part of the work to sub-contractors (Henok, 2018). On many projects particularly building projects, a minimum of 70% of construction work is done by the main contractor and the remaining work is transfer to the subcontractors (Enshassi, 2006).According to their subcontract document subcontractors delivered all labour, materials, equipment and services to the main contractor (Arslan and Kivrak, 2008).

Subcontracting reduces direct costs and overheads and allows main contractors to use more competitive smaller firms with lower overhead costs and better knowledge of the local market conditions, practices and procedures (Abdullahi, 2014). According to Daniel (2007) today subcontracting strategies are widely used by many companies in the construction industry to reduce some activities in the construction process and to eliminate part of the costs with welfare taxes.

Project performance which is quality, time and cost as well as main contractor ability depends on the performance of subcontractors (Al-Hammad, 1993).It is widely accepted that the working relationship between the main contractor and subcontractors having a significant effect on the success of the project (Arslan and Kivrak, 2008).However, strain in the working

relationship between the main contractor and subcontractor cannot be overemphasized in the construction industry. Contractual relationship between contractors and subcontractors are often exposed to dispute because of misunderstanding of each other.

This research focuses at studying the contractual relationship between main contractors and subcontractors and their impacts on main contractor competitiveness in Addis Ababa 20/80 condominiums which are found in Bole Arabsa.

1.2 Statement of the problem

The contractual relationship between the main contractors and their subcontractors differs from project to project. Main contractors played a significant role in the most projects in construction field, also commonly referred to subcontractors as the execution of construction works. However, their duties and responsibilities are subject to misunderstanding and results poor contractual relationship between them (Shimelis, 2018).Poor contractual relationship between parties in the construction industry with dispute and misunderstanding has detrimental effects to the development of the industry (Arain, 2012).

The Addis Ababa Housing Development Corporation (AAHDC) has implemented subcontracting practice in condominium projects by considering its' importance for the development and success of projects, main contractors as well as for the advantage of job opportunities creation.

The subcontracting practice are done to qualify and growth of MSEs, to have a good control on costs, and increase competition that targets to increase construction quality. However, researches are needed to know and protect that subcontracting is being implemented efficiently and its advantages are being practiced and not influencing the project's achievement in the construction industry as well as the contractor performance (UN-HABITAT, 2011).

Problems interrelated with subcontracting practice are considered as one of the major difficulty in construction projects. Those problems play the major role on project time and cost overrun (Vilasini, 2014). Though, the problems related with subcontracting have not been addressed particularly in condominium projects. There are studies about dispute, delay

of projects, defects and quality problems of condominium projects. However, none of the studies have considered the contractual relationship between contractors and subcontractor and their impacts on the contractor competitiveness, which is the area of interest in this study.

This research is largely due to the less involvement and influence of construction related researches on the contractual relationship between main contractor and subcontractor involved in the construction especially in Ethiopian condominium construction industry. United Nations Human Settlements Programme (UN-HABITAT) (2011) emphasizes that, absence of formal selection criteria, dispute between main contractor and subcontractor due to absence of legally signed documents, misunderstandings on payment practices and coordination problem and largely influence the quality, cost and duration of construction projects.

With the problem stated above, this research will undertake to look into the nature of the factors that lead to contractual relationship problems between the main contractor and subcontractor. And also to identify methods to enable a good relationship within the project team, which signifies a positive move away from the traditional adverse relationships.

1.3 Research Questions

In order to study the problem identified, the following questions have been stated in the study:

- What are the common selection criteria used by main contractors for selection of subcontractors in AAHDC 20/80 Bole Arabsa condominiums?
- What are the common factors that cause coordination issues between the main contractors and subcontractor in AAHDC 20/80 Bole Arabsa condominiums?
- What are relationship challenges between main contractors and subcontractors with respect to Signed contracts and payment practice in AAHDC 20/80 Bole Arabsa condominiums?
- What are the impact of subcontractor on the main contractor competiveness in AAHDC 20/80 Bole Arabsa condominiums?

- What framework can be followed to ensure good relationship between subcontractor and main contractor to support the attainment of project goals in AAHDC 20/80 Bole Arabsa condominiums?

1.4 Objective of the Study

Assessing the contractual relationship between the main contractors and subcontractors in Addis Ababa housing development corporation 20/80 condominium projects and study the influence of sub-contractors on the competitiveness of the main contractors is the main objective of this study. More specifically the study is expected to achieve the following objectives.

1. To study the major selection criteria used for selection of subcontractors by main contractors in AAHDC 20/80 Bole Arabsa condominiums.
2. To asses factor that causes coordination issues between the main contractors and subcontractor in AAHDC 20/80 Bole Arabsa condominiums.
3. To investigate the main contractor-subcontractor contractual relationship with respect to legal contracts and payment practice in AAHDC 20/80 Bole Arabsa condominiums
4. To investigate the impact of subcontractor on the main contractor's competiveness in AAHDC 20/80 Bole Arabsa condominiums.
5. To propose recommendations to improve the contractual relationship between the main contractor and subcontractor in AAHDC 20/80 Bole Arabsa condominiums.

1.5 Scope of the Study

This study intends to analyse contractual relationship nature and factors between main contractor and subcontractor related with selection criteria, coordination issue, payment practice and signed contracts in Addis Ababa Housing Development Corporation 20/80 Bole Arabsa condominium projects only.

Studying about contractual relationship between main contractor and subcontractor from all aspect needs too much resource so the study aims to focus on the main relationship problem areas. These four factors are selected because previous studies which are included in the literature review shows that, problems between main contractor and subcontractors in construction projects mainly arise due those four factors. According to Arditi and Chotibhong (2005), many problems arise between main contractor and subcontractor. The main problems

are related with subcontractor selection problem, finance, contract management, and workmanship. Therefore this study is limited to the analysis of issue that concentrates on the stated objectives.

The study is limited in Bole Arabsa 20/80 condominium projects. However the finding may apply to other 20/80 condominium sites. The research limits itself only in Bole Arabsa because, at the time of the study from the whole 20/80 condominium sites Bole Arabsa condominiums are under construction sites or in progress projects which helps to get detail information from subcontractors and main contractors. The study focuses only contractual relationship between main contractor and specialized subcontractors in the specified project.

1.6 Limitation of the Study

There are different challenges faced while doing this research the first thing is absence of well-organized secondary data, especially written literatures on main contractor – subcontractor relationship in Ethiopian context. The second challenge is faced at the data collection period, there were no reports showing the exact number of domestic subcontractors worked in AAHDC and some of respondents were unwilling to give responses and delay in return the questionnaire paper. The other limitation of the study was financial and other social problems faced during the time of the study.

1.7 Significance of the Study

Contractors and subcontractor play a vital role in endorsing the development of construction industry. Project productivity is mainly the result of coordination between project parties' especially main contractor and subcontractor, which are the main participant on the construction. However there are numerous issues that arise between main contractor and their subs which influencing relation between them .In order to minimize the relationship issues between main contractor and subcontractor studies will be important. Identifying of those problems will develop good relationship between contractors and their subcontractors and it helps to improve performance of the two parties. This research will discover and lists out those relationship factors between the main contractor and subcontractor that lead to the problems of relationship between them in AAHDC condominium projects.

In addition to identifying of those relationship factors, it also aims to contribute towards solving the problems that arise between the main contractor and the subcontractor through the recommendation given by the client, consultant, main contractor and subcontractor based on their perspectives. Also it might help policy makers to make good decisions on participation of subcontractor in the construction industry and be aware of the relationship nature of main contractor and subcontractor that hamper the condominium construction industry. The study also provide formulated information for stakeholders about key challenges and advantages of subcontracting practice.

1.8. Structure of the research

This study organized into five chapters.

- Chapter one focused on the introductory part of the study, which includes background of the study, statement of the problem, objectives, significance, scope, limitation and structure of the study.
- Chapter two contains literature review part of the study in which theoretical and empirical literatures related with the issue were incorporated.
- Chapter three deals about the research methodology: research design, approach, sampling design, sources of data, data collection methods and analysis were incorporated.
- Chapter four is all about the data analysis, interpretation and discussion of results.

Chapter five winds up by conclusion and gives recommendations as possible solution to solve the problem related with relationship between main contractor and subcontractor. Figure 1.1 shows the overall structure of the research.

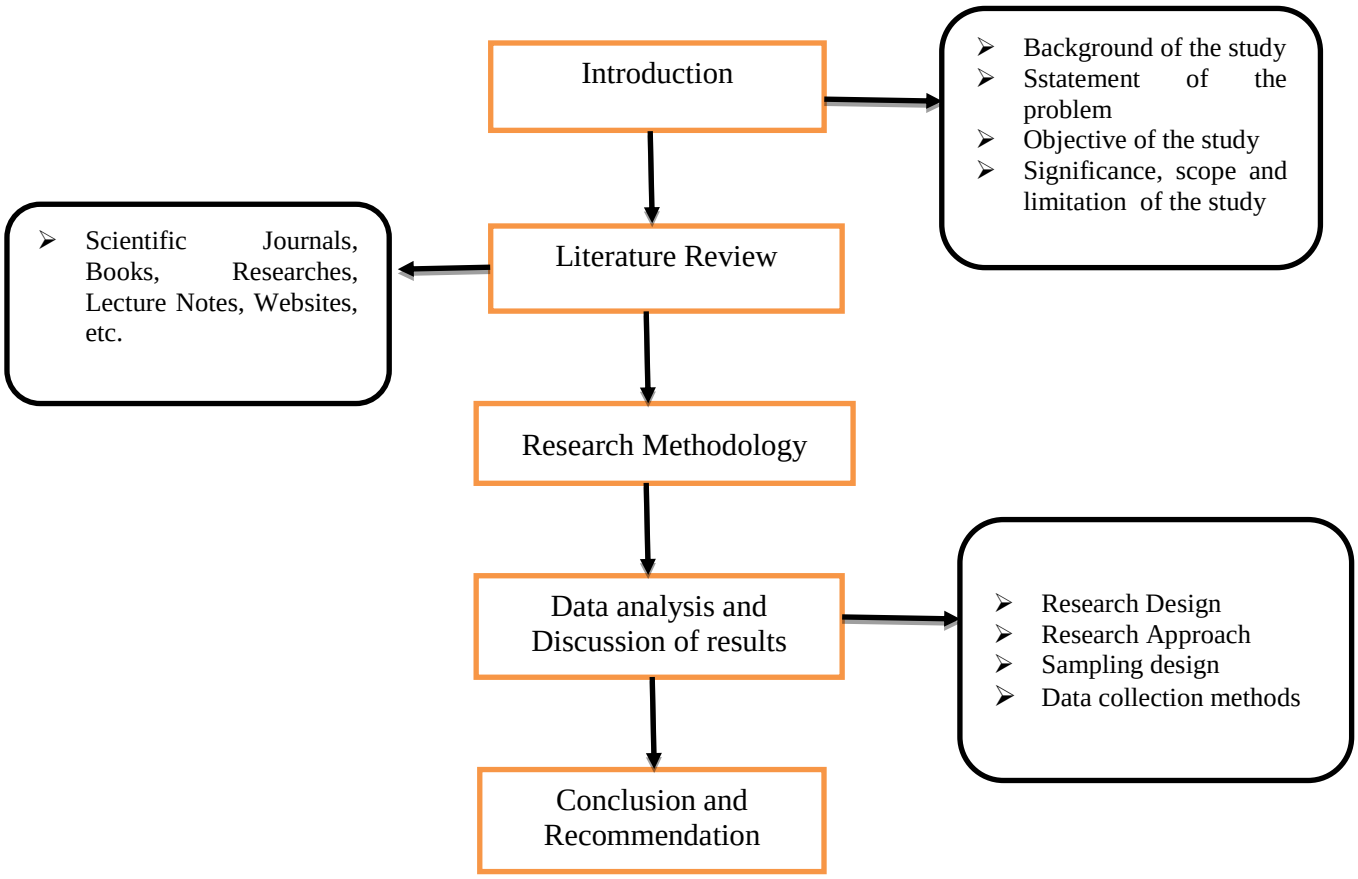


Figure 1.1 Structure of the research

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A construction project normally involves many parties in order to provide success to the project. The involvement of the client as owner, consultant, main contractor and subcontractor continuously are essential to make sure the project is in track and is able to be completed as demanded by the owner (Syahidah, 2017).

A construction project is awarded to a general contractor or main contractor, which resorts their work out to specialize outside firm to carry out specific project activities. A main contractor is a contractor engaged by the client and is responsible for all work on a construction site including the engagement of subcontractors to complete part of the works involved. Main contractors are responsible for managing the project such as contract administration with clients, project financing, material and equipment procuring, and monitoring the project progress (Benjaoran, 2015).

Subcontract is a common term used in construction. A subcontractor is a party that sign a contract with the client or a main contractor to perform a specific task or work for the main contractor as part of a project (Vivian, 2000).According to Civil Code of Ethiopia of 1960. Art. 3201(2), ‘‘a subcontract is a contract whereby the party having contracted with the administrative authorities substitutes a third party for himself for the performance by the latter of a part only or of an item of the contract.’’

The subcontractors may be domestic, nominated and selected subcontractors. Subcontracting initiated by the contractor himself are domestic subcontractors, subcontracting initiated by the client who sets aside certain parts of the contract work which are called nominated subcontractors and selected subcontractors are subcontractors solicited from a list that has been recommended in the tender documents as potential subcontractors; (Francis, 2006).

Construction projects can gain a great outcome by establishing good working relationship, conducive environment and minimizing conflict in the project team. With reference to this working concept, collaboration between parties as a team will ensure all the knowledge and experiences can meet the needs in today's world and also in future (Syahidah, 2017).

2.2 Parties involves in construction project

A construction project normally involves many parties in order to provide good productivity of a construction project. The list of possible participants is extensive and can include owners, contractors, consultants, project managers, designers, shareholders, legal authorities, employees, sub-contractors, suppliers, service providers, financial establishments, insurance companies, etc. Among them employer/client/, consultant, main contractor and subcontractor are parties directly involved in the construction industry. (Henry, 2017)

- **Employer /Client/**

Employer is the party that has the authority in making decision especially on goals, objectives, and parameters as well as the time that the project can start to commence since they are the owner of the project.The employer is the initiator and financer to all the construction project (Syahidah, 2017).

The General Conditions of Contract for Construction Works (GCC 2004) states that '"Employer" means the party named in the tender proposal who has called for tenders to build or construct erect or deliver the works and who will employ the contractor and the legal successors in title to the employer but not (except with the consent of the contractor) any assignee of the employer.'

According to FIDIC Red Book (2005) '"Employer" means the person named as employer in the Contract Data and the legal successors in title to this person.'

According to PPA (2011) '"Employer" means "Procuring Entity" as defined in the Public Procurement Proclamation.'

- **Consultant**

Consultants consist of a team that was appointed by the client to design and supervise construction project. consultant includes architect, engineer, quantity surveyor,electrical and sanitary engineers and other related consultant. Consultants are incharge in project budgeting and management, to advice the client and give solutions (Syahidah, 2017).

- **Main Contractor**

The General Conditions of Contract for Construction Works (GCC 2004) states that 'Contractor means the person or persons, firm or Company whose tender has been accepted by the Employer and includes the Contractor's personal representatives, successors and permitted assigns.'

According to FIDIC Red Book (2005) '"Contractor" means means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).'

According to PPA (2011) 'The term "Contractor" means "Supplier" as defined in the Public Procurement Proclamation.'

- **Subcontractor**

The subcontractor is usually appointed by the contractor or client to perform a part of the construction works by subcontracting the main contractors' work (Syahidah, 2017).

According to FIDIC Red Book (2005) '"Subcontractor" means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.'

2.3 Subcontracting in Construction Industry

Subcontracting is a common practice in the construction industry all over the world. On any particular construction project, main contractors may depends on different subcontractors to do specific tasks such as plumbing works, electrical works, mechanical works, drywall, roofing, steel erection and so on (McCord, 2010).Traditionally, the term 'sub-contracting' is used in construction projects when a main contractor exists (Al-Imam, 2012).

According to FIDIC Red Book (2005) construction subcontracting have been discussed that,"The Contractor shall not subcontract the whole of the Works. Except where otherwise provided by the Contract, the Contractor shall not subcontract any part of the Works without the prior consent of the Engineer. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and

neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.''

According to PPA (2011), government of Ethiopia requests contractors to outsource at least 15% of the total amount of work to Small and Micro Enterprises (SMEs) for public construction works and 10% for private construction works.It also states that subcontractors must satisfy the eligibility criteria applicable to the award of the contract and they cannot be in any of the situations excluding them from participating in contract.

In most construction projects, a vital role is played by subcontractors who are appointed to accomplish particular operations. Most of a time, the main contractor will complete the basic tasks and subcontract the remaining. Subcontracting is used much more extensively on housing and building construction projects than on other engineering and industrial projects (Kumaraswamy and Matthews, 2000).

Due to the uniqueness of each construction project, the work force is transient, multiple craft are involved, and each project is planned and worked in short time frames, and variety of materials and equipment required, one single construction project is often sublet to many subcontractors (Sambasivan, 2007). According to General Conditions of Contract for Construction Works (GCC 2004), there is restriction in the subcontracting practice. The General Conditions of Contract for Construction Works (GCC 2004) state that 'The Contractor shall not sub-let the whole of the works, Except where otherwise provided by the Contract, the Contractor shall not sub-let any part of the Works without the prior written consent of the Engineer.'

Subcontracting is practiced for a variety of reasons. The primary reason for subcontracting work is that need of specialized workman for specific task and it needs when the main contractor is not able to afford the cost of the full-time employment of skilled workers in each of the several specialized trades needed to complete construction projects (Al-Imam, 2012).

The main contractor's performance is strongly dependent on subcontractors. Completing projects with the required time, budget and quality depends mainly on the ability of subcontractor (Benjaoran, 2015).

2.3.1 Types of Subcontracting

There are three main types of subcontractors in construction projects. It may be specialist subcontracting, generalist and specialist trade subcontractors, or labour only subcontracting (Mudzvokorwa, 2016).

I. Specialist subcontractors: this types of subcontractors provide a special task on a project. They provide services like electrical, plumbing, heating, fixing of doors and windows etc.;
II. Generalist and specialist trade subcontractors: this types of subcontractors provide overall trade services or specialize on specific tasks such as plastering, painting and block work; and
III. Labor-only subcontractors or volume subcontracting: this types of subcontractors are skilled laborer that mainly done labor-only services on a project. The materials and management will afford by the main contractor.

In any construction job, there will inevitably be the use of subcontractors. The subcontractor is usually appointed by the main contractor to perform a part of the construction works. However, there are times where one finds that their agreement makes reference to a nominated subcontractor and a selected subcontractor (Syahidah, 2017).

According to the contractual point of view, subcontractors could be categorized as domestic subcontractors, nominated subcontractors, and selected subcontractors (Syahidah, 2017):

a. Domestic subcontractor: are subcontractors appointed by the main contractor. Domestic subcontractor will carry out the works on behalf of the main contractor and basically, they will do all the general works. Hence, the scope of works of a domestic subcontractor includes all the works stated in the subcontract in accordance with order from the main contractor (Mudzvokorwa, 2016). The main contractor remains fully liable to the employer for the works particularly in respect of the workmanship and delay caused by the sub-contractors (Kale and Arditi, 2001).
b. Nominated subcontractor: a subcontractor nominated by the employer which the contractor is obliged to appoint as a subcontractor (Mudzvokorwa, 2016). According to FIDIC Red Book (2005) a Contractor is not under any obligation to employ a nominated subcontractor against whom he raises reasonable objection by written

notice to the engineer which may include: the subcontractor has insufficient competence, resources or financial strength.It is a common practice in the building industry for specialist work such as mechanical & electrical installation or structural steel work, which form a substantial part of a building project, to be awarded on a nominated sub-contract basis. (Henry, 2017)

c. Selected subcontractor: a subcontractor selected by the contractor in consultation with the employer in terms of the requirements of the contract (Syahidah, 2017).

In addition to the above types, sub-contracting arrangements are mainly categorised on the basis of outsourcing decisions at project onset, mode of entry, functional participation, payment methods and their capabilities. These general categories are illustrated in Figure 2.1 (Vilasini, 2014).

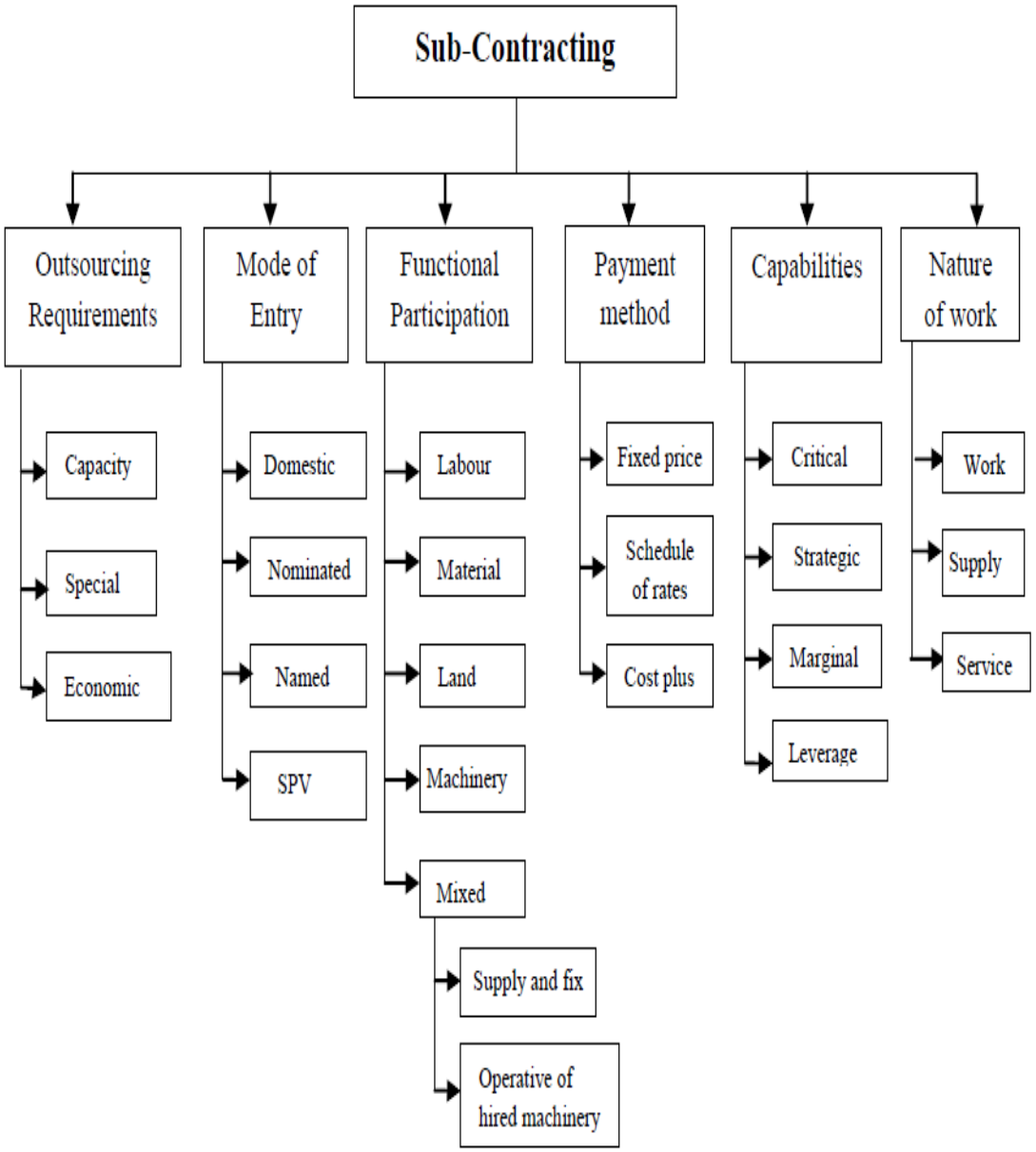


Figure 2.1: Sub-contracting categories

2.4 Concept of contractual relationship between parties involved in construction industry

Relationship as is a social exchange process that includes personal bonds between two persons or more, and plays an important role during their development (Syahidah, 2017).

Contractual relationship between main contractor and subcontractor refers to the working relationship between people or companies who interact because of their work ;(also) a level

of cooperation sufficient to allow work to be done, progress to be made etc., (Karlsson, 2018). John (1991) also describes the term contractual relationship between maincontractor and sub contractors,it is the interaction of the two parties when subcontractors work for the main contractor and carry out a specialized part of the construction work on behalf of the main contractor.

In construction mismanagement the type of working relationship of main contractor and subcontractor mainly affects the main contractors and projects performance. This shows that relationship is the most influential factor in projects. (Kale and Arditi, 2001).

When the scope of work and logical dependencies between sub-contractors works are not fully understood by general contractor and owners, it became a critical problem to the success of complex and fast-paced projects. Cost of litigation and dissatisfied customers due to the conflict between main contractor, subcontractors and other project participants would then followed (Dossick, 2009).

According to Public Procurement Agency (PPA, 2011), Contractual Chains of Liability between contractor and sub-contractor relationship have been discussed that, "The Contractor shall be responsible for the acts, defaults and negligence of his Sub-Contractors and their agents or employees, as if they were the acts, defaults or negligence of the Contractor, his agents or employees. The approval by the Public Body of the sub-contracting of any part of the contract or of the Sub-Contractor to perform any part of the works shall not relieve the Contractor of any of his obligations under the contract".

2.5 Subcontractor Selection

Subcontractor selection process is the most significant phases in construction, since choosing the right subcontractor for the job influences work quality and project success. At the time of subcontractor selection process, selecting the best suitable subcontractors for the required task is important for general project success (Tayeh, 2019). The primary goals of the subcontractor selection process in construction projects is to reduce project risk, optimize quality and build and maintain good working relations between project parties (Bailey, 2016).

The principle of selecting the right person for the right job mainly influences the success of the construction project. But much attention is not given to subcontractor selection in construction (Arslan and Kivrak, 2008).

For a general contractor, having the ability to select the most suitable subcontractor for a particular task, is an important attribute to achieving competitive advantage, which may lead to both value/cost/ advantages, in relation to other competitors. Selecting high quality subcontractors promotes the overall quality of projects and improves the reputation and qualification of the general contractor in future projects. Establishing an effective framework to select subcontractors via the most effective methods is essential. Employing value creation incentives in the selection process extending from major stakeholders through all major project functions of the construction organization is essential in establishing an environment of awareness, improvement and value (Bailey, 2016).

Subcontractors' financial, technical and general information are needed in order to select the most suitable subcontractors for the project. Main contractors should take in to considerations numerous factors during the selection process. The factors may consist of the product quality, effectiveness, employment of skilled manpower, reputation of the company, accessibility to the company, completion of the work on time and cost etc., (Tayeh, 2019).

Subcontractor evaluation is an important stage in project management. Evaluating subcontractor capacity and ability becomes more vital when the construction project is high and complex. Tayeh (2009) emphasised this by stating that choosing the most suitable subcontractors for the relevant work is highly critical for the overall project performance.

For efficient working relationship between the main contractor and subcontractors, several factors should be put into consideration during the selection of the suitable subcontractor such as; cost, quality, time and adequacy. This factors that are used to select the suitable contactor include subcontractor's background, work achievement and progress, general obligation, communication, quality, organization structure, long term or past relationship with the main contractor, financial strength and past experience (Arslan and Kivrak, 2008).

Henok (2018) mentioned that six important factors were found that lead to willingness to cooperate among main contractors and subcontractors which are; collaboration which

encourages teamwork, develops cooperation between team members, stimulate information sharing, improves quality and timely project completion, enhance service quality, and better communication among project members.

There are two type stages of subcontractor selection criteria in international construction projects which are the shortlisting and negotiation (Serdar, 2017). Shortlisting is composed of ten criteria such as past experience, past performance, formal relationship, financial strength, workload, safety records, reputation, litigation history, personal relationship, and home office location (Serdar, 2017). A short list of potential subcontractors for a project work package should be formed and each subcontractor subjected to a detailed investigation to assess the current state of the financial, technical and managerial ability of each subcontractor. These includes a subcontractor's permanent place of business, adequacy of plant and equipment to do the work properly and expeditionary, suitability of financial capability to meet obligations required by the work, appropriateness of technical ability and experience, past performance of work of the same general type, and the current financial position of the subcontractor to perform the contract well (Hatush, 1997).

The second selection criteria is the negotiation stage which contains seven criteria such as knowledge of project, reliability, selfless attitudes, and ability to solve problems, enthusiasm for the project, quality awareness, and level of communication. The third one is final selection criteria which consist of price, availability of technical personnel, labour and equipment (Serdar, 2017).

The following selection criteria are mostly specified in different studies for selection of subcontractor:

- **Past experience**

This criterion includes the subcontractors' national and international experience in the field of work subcontracted in the past years. These previous projects undertaken are evaluated by means of the number and scale measured in cost, duration, and square meters (Serdar, 2017).Past experience of subcontractors is important factor used by main contractors for selection of suitable subcontractors because implementing similar previous projects enables the subcontractor to work smoothly, complete the works on time and helps to achieve the best quality (Felix, 2017).

- **Price**

The contractors' objective is to maximize their profit. Firms that do not come close to maximizing their profits and minimizing their costs are not likely to survive (Coase, 1937). Bidding for specific types of the construction work and thereby having a comparatively low bidding variability relative to other bidders has a vital aspect for candidate subcontractors (Serdar, 2017). Based on the contractors' need to minimize cost and maximize profit, they are likely to select subcontractors who submit the lowest price (Dulaimi and Hong, 2002). A large number of bidders competing for a subcontract can give rise to efficiency in subcontractor selection and negotiation processes and reduce the value of the lowest bid received. This means that the expected bid price falls as the competitors' number increases, reflecting an advantage of selecting from a larger population of firms (Serdar, 2017).

- **Technical Knowledge**

Technical knowledge is an understanding of complex elements required to effectively complete tasks associated with a given profession (Gushgari, 1997). It comprises knowledge of technical information about objects and concepts required to do the job, and knowledge of processes and judgmental criteria required for efficient or correct action on the job (Hunter, 1983).

- **Quality**

Quality is the extent to which subcontractors actually deliver products or services that meet project requirements .Besides having the technical knowledge to accomplish desired tasks, the provided work quality is a critical antecedent to the overall project performance (Alinaitwe, 2007). Arditi and Chotibhong (2005) define the concept of quality as meeting the legal, aesthetic, and functional requirements of a project. Admittedly, technical knowledge can contribute to the quality of the final product, but there are other factors determining whether the final product delivered by the subcontractor meets project requirements (e.g. working environment, quality planning and control, and attitude of employees) (Alinaitwe, 2007).

- **Past performance**

Past performance is a guide to likely future performance and illustrates a subcontractor's ability to execute a contract. It means that subcontractor's past performance is a good

indicator of its technical and managerial abilities (Serdar, 2017).Good performance in previous projects can be seen as the sign to improve a subcontractor's reputation and linked to company image (Hatush, 1997).Poor project performance may result in adversarial relationships among different construction parties (Henok, 2018).Good past performance is not a guarantee for future performance. However, past behaviour and/or past performance is the best predictor of future behaviour and performance (Hunter, 1983).

- **Cooperation**

Cooperation or the extent to which subcontractors fulfil agreements and proactively solve and prevent problems is seen to be highly relevant for the operational efficiency of construction projects (Arditi, 2005). Main contractors will be more willing to select subcontractors that show a positive attitude, commitment, and quick response to their needs. (Alinaitwe, 2007).

- **Financial strength**

When a subcontractor has to carry construction losses in a project or when client- and/or main contractor-based cash flow/progress payment difficulties are the case, financial background and bonding capacity of subcontractor should be adequate. Financial strength is the basic element of responsibility and risk-sharing behaviour which is one of the most important advantages of subcontracting. (Serdar, 2017)

- **Workload**

Numbers, types, locations, and scales of current/planned projects and completion percentages of current projects are included under this criterion (Arditi, 2005). Subcontractors with a high work load may submit a high quotation and, if selected, may not fit the main contractor's schedule, causing a delay (Bailey, 2016). This criterion aims to eliminate the risk of subcontractor failure arising out of excessive workloads (Alinaitwe, 2007).

- **Reputation**

Positive information about a subcontractor's behaviour is important factor for selection of subcontractors. If a subcontractor is not a well-known organization, it is likely to encounter unanticipated problems during construction (Bailey, 2016). Positive information about a subcontractor's image distinguishes it from other potential or applied competitors and acts like a facilitator for formation of transactions in the future (Serdar, 2017).

- **working relationship and Level of communication**

Both main contractors and subcontractors tend to over-rely on building working relationships, since they believe that better communication reduces the risk of misunderstanding. In this regard, an informal relationship between parties is perceived as a vital component of establishing and sustaining business partnership in practice (Arditi, 2005).The communication between main contractors and a subcontractor, mutual respect and ease of contact are inevitably involved. Subcontractor's inclination towards team working is another factor constituting this criterion (Bailey, 2016).

- **Location of home office**

Head office location and, if available, local office location of a subcontractor are used as an indication of the ease of mobilization and communication with site office, because the head office normally provides support to each project in administrative issues and sometimes in technical matters. A long distance makes a business trip very time-consuming and the time difference severely inhibits communication (Serdar, 2017).

- **Reliability**

Whether trustworthiness, believability, and honesty are established between parties is the focal point of this criterion. How much a subcontractor respects common professional ethics is also paid attention. In this context, communication skill and self-confidence are considerable elements (Hatush, 1997).

- **Selfless attitudes and Enthusiasm for the project**

This criterion includes determination of how much a subcontractor can work in a selfless manner in a project. Whether a subcontractor can take the risk of using its extra financial and technical resources to complete a subcontracted work in the event of any problem during construction, such as cash flow difficulties, is revealed (Serdar, 2017). Enthusiasm for the project aims to measure the level of subcontractor's willingness to be awarded (Endut, 2008).

- **Ability to solve problems**

A main contractor tends to work with a responsive and proactive subcontractor who is able to resolve unanticipated problems and conflicts that might occur without delaying the progress

of construction works and without requiring any support. Operations of a good organization can be seen through quick responses to actions (Arain, 2012).

- **Labour and Equipment**

The number and quality of subcontractor workers are parameters considered in this criterion. Containing these two factors, man-hour values for unskilled and skilled workers are taken into account as an indicator of productivity. construction equipment also examined in terms of the number and quality under this criterion (Serdar, 2017).

2.6 Contractors - subcontractor contractual relationship issues and conflicts

Every project is different in situation and condition for example; personnel characteristics, construction productivity, types of material use, weather condition as well as difference in terms of required time and project cost. Furthermore, the uniqueness in construction industry has always been related to its nature of uncertainty (Syahidah, 2017). Partnering relationship between general contractor and subcontractors were proposed to create a win-win situation (Kumaraswamy and Matthews, 2000). Long-term working relationship must be established to avoid adversarial relationship between general contractor and subcontractor (Al-Hammad, 1993).

Bad working relationships and interface problems between the main contractor and subcontractor could arise due to problem in communication, shortage of project information on site, lack of proper site control and supervision, etc. This may result management problem, quality problem, time and cost overrun and create dissatisfaction between parties involved in the project (Arain, 2012). All subcontractors have not similar awareness about main contractor-subcontractor contractual relationship. In some cases there is good partnership or team work while in the others cases their working relationship faced dispute, distrust and poor communication (Chan, 2006). In most cases subcontractors enter into an agreement without any formal discussion taking place between the two parties. This may encourage dispute and misunderstanding between them before construction work has begun (Moody, 2008). The addition of harsh contract terms in subcontract agreements by main contractors

and scheduling conflicts also results contractual relationship problems between main contractor and subcontractors (John, 1991).

Many problems arise between main contractor and subcontractor concerning on the management, quality, workmanship and other related problem that will influence the working relationship between the main contractor and subcontractor. The subcontractor scope of works and responsibilities are always misunderstood when there is some confusing information by the main contractor and subcontractors. The main contractors complain that subcontractors have a habit of bringing in adequate workmen to site, a practice which hampers the works (Dulaimi and Hong, 2002). Common risks main contractors face include weather, unexpected job conditions, personnel problems, errors in cost estimating and scheduling, delays, financial difficulties, strikes, faulty materials, faulty workmanship, operational problems, inadequate plans and specifications, and disaster. The entire situation stated had leading relationship problems between the main contractor and subcontractors (Garavelli and Albino, 1998).

In a recent study on the building construction sector of the US, the issues of subcontracting practice were identified, which include: none scheduling realising of payment, subcontractor selection process, construction insurance, site safety, partnering arrangements with various parties; and issues related with productivity (Mudzvokorwa, 2016).

Main contractors in traditional construction procurement are primarily concerned with maximising their profit. Subcontractors who offer lowest price will selected by the main contractor with such attitudes they fail to understand that price is not the only good instrument to sustain business transactions, and in no time things turn sour between them and their work partners (Moody, 2008).

Using of unclear and harsh contract terms/clauses in their contract document is another negative attitude main contractor's exhibit which prevents effective partnership and team work in the projects (Dulaimi and Hong, 2002). Clauses to terminate and not to offer damages for delays or the popular "paid when paid" clause have become regular inclusions to standard subcontracts. These clauses are cruelly enforced in such a way that long standing contractual relationships can be terminated the moment there is a failing by the sub-

contractor. This frustrates subcontractors' attempts to seek compensations even in instances where they are genuinely entitled to them (Lew, 2012).

It is also the case that main contractors and subcontractors working under the traditional construction procurement arrangement do not plan and develop the project programme together after the project is let. This failure to work together unfortunately leads to incorrect and guessed duration of critical activities because sufficient and broad view information was not gathered. This has the potential to cause programmes to fail, resulting in delays on projects (Tayeh, 2019).

The blame culture between main contractors and subcontractors is so severe that it inevitably erodes trust in the working relationship. By focusing on their respective self-interests rather than on mutual interests, there have been failings in satisfying clients' needs (Chan, 2006). It must be said that trust is fundamental in any working relationship since people are more likely to work better and freely with those they believe share their values (Kale and Arditi, 2001).Where an atmosphere of trust is allowed to thrive in any business dealing, parties will definitely gain the benefits of such interactions (Loh, 2000).

The contractual relationship also badly affected by low experience and low capacity of the main contractor. If a main contractor has no enough experience in the field, it is unable to plan his work properly; it lacks capability to control his subcontractors and also it lacks understanding on the scope of work he should cover (Ibrahim, 2017).

Generally most problems between contractor and subcontractor that are commonly found in construction projects result of contractual issues, coordination issue, lack of communication, contractor's financial problems, changes in material and labour cost, conflict of scheduling and planning, lack of safety, incomplete working drawing, shortage of construction materials, shortage of skilled labours, termination of work, incorrect pricing and act of God factor (force majeure) (Syahidah, 2017).

2.6.1 Coordination issues

Proper subcontractor selection is not the only factor for success of a construction project, working in coordination and controlling of subcontracted work during the construction stage is essential (Lew, 2012).

Most construction projects that experiences lack of coordination may come due to poor project scheduling and planning. This will result in lack of project management and can cause a critical problem to the quality of end product. Syahidah (2017) illustrates that planning includes what type of activities involved and how to conduct the activities, while scheduling focuses on when will the activities take place and who will be in charge. The purpose of scheduling and planning is to ensure a smooth project flow and at the same time, it also serves other purposes. Scheduling and planning started with the owner and the architect, and later expanded with the contractor, the subcontractors and the material suppliers (Syahidah, 2017).

Lack of communication is the other problem which leads to coordination problem. Communication is defined as getting the receiver and the sender tuned together for a particular message (Imtia, 2005). Communication happens when one party transfers some understandable data to the other party. According to Syahidah (2017) communication usually includes the exchange of thoughts, opinions, sentiments, facts, and information between two or more persons. Receiving a feedback is very important as it assures that the message has been properly conveyed to the receiver.

Multilayer subcontracting is one of the causes of coordination problem between main contractor and subcontractor (Bassam, 2007). A situation that subcontractor will further separate their work into small parts and segregate them to another subcontractor is called multilayer subcontracting (Chan, 2006). Multi-layer subcontracting leads to ineffective coordination between main contractors and subcontractors and are causes for poor construction quality and disputes among the contracting parties (Syahidah, 2017). Multilayer subcontracting has its downside which could lead to project failure or poor project performance specially communication and coordination performance of parties (Syahidah, 2017)

Contractors and subcontractors should make regular meetings to review progress and joint site inspections to check the quality of completed works, work in progress and safety compliance may be considered (Tayeh, 2019). Moody (2008) mentioned that conducting weekly meetings with all sub-contractors is a very important coordination instrument. Daily contact and face to face meeting is preferable to solve subcontracting problems at early stage. To recognize subcontracting problems in detail preparation of weekly, monthly, quarterly and other work reports are necessary (Moody, 2008).

When subcontracting, parties involved should understand their rights and obligations .By the contractor side delay in providing the necessary material, providing proper security for site and plant, frequent absence of main contractor from site, low experience and capability of the main contractor and participation of main contractor in many projects at the equal time may harsh their working relationship and leads to poor site coordination (Rahman, 2013). Subcontractors also involve in several projects at the same time, have poor interaction with other sub-contractors, negligence of main contractor instruction and shortage of skilled labour. Client also contributes for coordination problem between main contractor and subcontractor. Clients give instructions to the subcontractor directly without informing the main contractor, suspension in releasing and holding of payments to the main contractor and sub-contractors, and delay in supplying materials this all results coordination problem between main contractor and subcontractor as well as the entire constriction parties (Mudzvokorwa, 2016).

Collaboration is necessary in construction project to ensure the success of a project, especially to the main contractor that holds the greatest responsibilities towards the development of the project (Rahman, 2013).

2.6.2 Contractual Issues

A contract in construction industry can be defined as an agreement that specified the work needed to carry out by the contractors and the required payment for them by the employer (Rahman, 2013). Standard conditions of contract (1994) states "Contract" means the conditions of contract, specifications, methods of measurement, drawings, price, bill of

quantities, schedule of rates and prices, the letter of acceptance, the contract agreement, addenda and other documents issued thereof.

According to FIDIC 1999 "contract" means the contract agreement , the letter of acceptance, the letter of tender, these conditions, the specification, the drawings, the schedules, and the further documents (if any) which are listed in the contract agreement or in the letter of acceptance. According to PPA 2011 "Contract" means the binding contract agreement entered into between the public body and the contractor, comprising contract documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein, the contract agreement, the letter of acceptance, the letter of tender and these conditions.

In the contract, it contain the statement about work specified to be done by contractors or sub-contractors, quality of work, time for completion the project task, payment, and responsibilities of parties involved towards the project (Rahman, 2013).A subcontract in construction project is a contract which contains necessities that transfer certain duties, obligations, and requirements from the main contractor to the subcontractor. A business-to-business relationship between a main contractor and subcontractor is typically formed through a contract for providing a building service, in this case building and construction work. This may take the form of an oral agreement, a simple standard works contract or a contract specific to a particular activity. Subcontract documents may consists of a detailed scope of work, the payment terms, provisions for changes, warranties, arrangements for temporary facilities and any other special subcontract requirements. Contract terms in contract document have to be specified clearly (Arditi, 2005).

On large projects, many subcontractors in turn subcontract to others to carry out part of their responsibilities. The contractual relationships may therefore take the form of a pyramid, with many of the people having no contractual relationship with the main contractor. In such circumstances, it is usually those at the bottom of the pyramid that bear the greatest risk (Mudzvokorwa, 2016).

When subcontracting, it is important to understand rights and obligations under the construction contract to prevent misunderstandings, disputes or conflicts. Contractual conflict is defined as a dispute which includes interpretation, clarification and construed of the

contract. Contractual conflict occurs when there are disagreements or divergence of opinion on the defective contract terms (Karlsson, 2018). Construction contracts can be said as the major source that caused conflicts in construction industry today. This is because, in construction projects, a number of different contracting entities with different needs are expected to cooperate and coordinate their efforts (Tekle and Mahelet, 2009).Almost 95% of all the claims are closely linked to contractual relationships among the project participants of the construction project. Subcontracts are often used in most construction works so as to meet the target and demand from the owner of the project (Lew, 2012).

Disputes between main contractors and subcontractors can arise due to breaches of contract, such as unpaid money or defective workmanship. Most of the contracts awarded to the subcontractor contain several contracting issues that will cause problems between the main contractor and the subcontractor when executed on the site later. Improper project management either by the main contractor or the subcontractor may lead to the interface problem between both parties. The issues will get worse if the contract letter is incomplete. Many disputes can be resolved through clear communication and negotiation. It is important that to have a dispute resolution clause in any construction contracts (Tayeh, 2019).

According to contracts main contractors are the responsible party for the construction of projects, but they depend on subcontractors to execute the works. This is helping them to reduce their overhead and operating costs, improve competence, and attaining a more economic delivery of projects (Dulaimi and Hong, 2002).

A contract document should be prepared with great care as it defines the obligations of the contract parties in the transaction and, in case of dispute, is the key reference for judging which party has breached his obligations and thus should be held liable to damages inflicted upon the other party (Francis, 2006). Un acceptable forms of subcontracts contains provision for payment procedures including periods of retention, rights and obligations, a dispute resolution procedures (Tekle and Mahelet, 2009).

2.6.2.1 Ambiguities in Contract Documents

The involvement of variety of parties in a project is administrated by a contract which has the function of clarifying the trade-off of construction materials and services with money.

Contractual problems caused significant impacts to construction disputes. One of the contractual problems is ambiguities in contract documents. Ambiguities in contract documents indicate that there are defective in contracts terms and it clause. Ambiguity means the existing of more than one or double meaning (Rahman, 2013).

Contract documents should clearly and unambiguously define the scope of work; the performance and quality standard required of the works; the methods for performance measurement and verification; and the criteria for acceptance. Terms and conditions, especially payment terms and requirements on retention, bond, warranty, defect liability, and liquidated damages should be fair and reasonable and means for efficient dispute settlement should be incorporated (Yisan, 2013).

An ambiguous contract can lead to conflict among parties. Ambiguity in contract documentation may not specify the activities clearly, responsibilities and risks involved. It can cause errors and risk to the project that may lead to dispute. (Rahman, 2013).

2.6.2.2 Errors and Omissions in the Contract Terms

The errors and omission in the contract documentation is one of the causes of contractual claims and disputes. Errors can be considered as mistake in interpretations and calculation, and omissions (Yisan, 2013). Eriksson (2002) defines errors are plan or specification details or contract administration actions that are incorrect, conflicting, insufficient, or ambiguous (items are shown incorrectly) and omissions are cases in which the plans, specifications or contract administration actions are silent on an issue that should otherwise be addressed in the documents (items are missing, not shown or not included). Errors and omissions means design deficiencies in the plans and specifications, which must be corrected in order for the project to function or be built as intended (Yisan, 2013).

2.6.2.3 Unclear payment terms

Involvement of unclear payment terms in contract documents is the other negative attitude which strongly affects contractual relationship of main contractor and subcontractors and inhibits effective collaboration between them (Dainty, 2001).

A construction contract comprise of the payment that need to pay for the work and the date of the payment need to be made. It also included any additional and reduced payment which has been computed in that project (Othman, 2012). A clear contract document must include the clauses that specify the payment terms. Many disputes arise due to payment issues, thus it is significant to have a well-drafted payment clauses to state clearly on the process of payment by contractor. Main contractors will delay the payments if there are ambiguities of the payment statement in contract. Ambiguities of contract in payment terms can cause loss of profit. This may due to some of the contractor refuse to pay for the completed work because there are not mention clearly the proper payments in the contract. Unclear payment terms can lead to dispute and claims (Eriksson, 2002).

Payment terms should include the timing for submission of interim payment claims, the substantiating information to be included in the claims, the methods and procedures for determining and certifying how much money is to be paid and when payments are to be made (Francis, 2006).

The payment terms in a contract or subcontract are important means for ensuring the contractor or subcontractor will perform adequately, in terms of meeting the quality standard and timely completion of the works.Payments will be made to the contractor and subcontractors in stages whereas the amounts to be paid each time will be determined according to the quantity of works satisfactorily completed at the time and certified as such (Francis, 2006).

2.6.2.4 Termination for convenience

Sometimes main contractors terminate their sub-contractors without any reason but just for their own need. Termination for convenience is a contract provision that allows a main contractor to end the contract between main contractor and subcontractor without any reason but just for the main contractor's convenience (McCord, 2010).

According to FIDIC (1999) ''the subcontract provides that the Contractor may terminate the Subcontractor's employment whether the Contractor's employment under the main contract is terminated or the main contract is itself terminated.

Applying of this right by the main contractor negatively affect contractual relationship between main contractor and sub-contractor since subcontractors considered it as heavy-handed and harsh (McCord, 2010).

2.6.2.5 Non-adherence to the conditions of the contract

McCord (2010) emphasized that dispute is arise between main contractor and subcontractor due to negligence of terms in the contract. Skipping or neglect applying some conditions of the agreed contract by the subcontractor and if the contractor becomes aware of this neglect, a dispute and conflict will arise between main contractor and the sub-contractor (Joseph, 1996).

2.6.3 Management Problems

2.6.3.1 Poor contract management

A construction contract should consist of risk allocation among the project developers, contractor and consultant. Improper risk allocation in contract will lead to disputes among the contracting parties and may drag in to court settlement (Mudzvokorwa, 2016).

According to Hinze (1994) one of the major construction cost factor that all developers, consultants contractors and subcontractors agreed is poor contract management. Poor management of contract can lead by lack of management skills, less concern on contract plans, cost control, and site and resources management (Shimizu, 2002).Poor contract management may lead to time overrun. Projects delay will result in negative impacts such as dispute between contractors and developers, over costs, loss of productivity and profit and contract break off (Lew, 2012).

2.6.3.2 Lack of Quality Assurance/ Quality Control

Quality assurance or quality control is also a key factor of internal conflict in construction site. Quality assurance is defined as plans and organized actions necessary to assuring that a product or service will achieve the requirement of quality. Quality control refers to the related activities that need to implement in quality assurance program (Arditi, 2005). Effective quality control can avoid conflict and dispute which caused by changes, mistakes and

omission. Construction quality assurance or quality control reduces disputes between project parties (Thomas, 2011).

2.6.4 Design problem

During project implementation there is a threat that the client may modify specifications or requirement of work to be redone. Modification of drawings and specification at the time of project implementation mainly affects productivity and efficiency (Arain, 2012). According to Yisan (2013), efficiency problem in the project leads to interface problem between main contractor and subcontractor. If work is carried out by the subcontractor according to the original work-drawing and client wants to revise it after execution of the task, problems will arise between the main contractor and subcontractor when approving the cost of executing the work specified in the revision (Arain, 2012).

Delay in providing full design drawings by the owner affects work progress of both main contractor's and subcontractor'. This may lead to contractual relationship problem or conflict among project parties (Soon, 2007).

For the effective implementation of the construction work and preventing dispute due to design among parties, clear working drawings and specifications are important. Incomplete or unclear drawings create problems with far reaching effects on productivity (Chan, 2006).

2.6.5 Payment practice

Payment is a sum of money paid to someone in return for goods, work done or services rendered. In the construction industry, payment is the sum of money paid to contractors after their work for certain projects has been successfully completed (Arditi, 2005).

According to Ibrahim (2017) payment is considered as the life blood of the construction industry because construction projects often involve very large capital outlay. It is very obvious that a healthy and consistent disbursement of money is a critical point in determining contractor performance.

Payment problems in the construction industry are not a new phenomenon. Payment problem between main contractor and subcontractor may take the form of under-payment, late or delayed payment and non-payment all together. Non-payment or under-payment refers to

situations where an expected payment was never received, and/or would be considered bad debt, written off, or lost partially/fully. Late or delayed payment on the other hand, is a situation where payment is not made to head contractors or subcontractors on time, in accordance with the timelines agreed between the parties to the contract (Dossick, 2009).

In order to ensure the flow of the work activities under the contract and its eventual successful realisation, construction contracts have to be drafted. Most of these standard forms of contracts contain specially drafted clauses which govern all aspects of the subject of payment under the contract (Arditi, 2005).

2.6.5.1 Causes of payment problems

According to different studies various factors have been identified as the potential causes of payment problems. These include:

- The client tends to hold payment from the contractor's claim. Employers may withhold payment to the main contractor due to major defective construction work, disputed work, failure to comply with any material provision of the contract, third party claims filed or reasonable evidence that a claim will be filed, and failure to make timely payments for project resources (Arditi, 2005).Employers' poor financial management could cause them to have insufficient operating funds when they are obliged to pay the payees (Ameer, 2005).
- Lack of adequate supporting documentation (Kadefors, 2004.).
- Conflict among parties involved: 'Payment, not unexpectedly, has always been the main subject of disputes'. It is expected that conflict if unsettled will escalate into disputes which can also cause delayed payment (Abdullahi, 2014).
- Delay in certification (Arditi, 2005).
- Disagreement on the valuation of work done ; When the scope of work executed and valuation of work done are not fully understand by general contractor and owners, it became a critical problem to the subcontractors and main contractors' relationship and success of projects (Yisan, 2013). Payment delay also happen if the quantities of works certified to be complete are less than the claimed quantities, (Francis, 2006).

- Contractor's financial difficulties: Construction is a labour intensive industry. Whether the contractor has been paid or not, the wages of the worker must still be paid. If a contractor experiences financial difficulties during the course of a project, it may result in lacking of resource availability. Consequently, the progress of the project is affected which may require variation and extension of time. ((Thomas and Napolitan, 1995)
- 'Pay-when-paid'practice: Subcontractors are often paid late by general contractors because of 'pay-when-paid' and 'pay-if-paid' clauses included in most contract forms, which tend to increase total project cost. Francis Yik (2006) justified that subcontract only requires the main contractor to pay the subcontractor within few days after the main contractor has received payment from the employer, i.e. the 'pay-when-paid' principle. As the main contractor was not paid any cash, he considered it not an obligation for him to pay the subcontractor. These often give rise to conflict and disputes between a main contractor and a subcontractor (Francis, 2006).

2.6.5.2 Impacts of delayed payment

The payment flow starts from the financial institution to main contractor to sub-contractor and so on down the chain**.** The collapse of one party in the payment chain could cause severe impacts to parties down the contractual chain. The difficulties are further compounded by the fact that it is a normal practice to include 'pay-when-paid' clauses provision in the subcontractor's contract. The burden of the main contractor's delayed payment due to his own faults will be shifted to the subcontractor as well and this in turn will affect the subcontractors' cash flow (Naseem, 2005).

All the problems in the construction industry begin when payment in the exact amount due by the date shown on the statement is not received. Disagreements then lead to arguments and conflict, finger-pointing, blaming and judging, buck-passing and lawyers. Projects exceed initial time estimates and costs escalate and extensive delays are experienced (Arditi, 2005)**.**

The consequences of the subcontractors being paid late are critical. In such situations, some subcontractors tend to increase their quotations which in turn increases total project cost, an undesirable condition for owners. It should be possible to improve subcontractor payment practice if developers pay main contractors on time, and in turn main contractors pay their

subcontractors as soon as possible after completion of the subcontract work. The possible impacts of delayed payment have been identified as follows (Arain, 2012):

- Creates financial hardship: It is anticipated that delayed payment can create financial hardships for the sub-contractor.
- Creates a negative chain effect on other parties: 'the construction payment blues have domino effects'. A delayed payment by one party may affect the entire supply chain of payment of a construction project.
- Leads to abandonment of projects
- Results in formal dispute resolution, e.g. litigation/arbitration
- Creates negative social impacts
- Results lack of trust between the two parties (Mudzvokorwa, 2016).
- Creates cash-flow problems: It is universally accepted that delayed payment affects the contractor's cash flow, which in turn can affect the progress of the works profitability and subcontractor performance (Naseem, 2005).

2.6.5.3 The Ways to improve delayed payment

Delay of payment in construction industry seriously hampers clients and contractors ability to perform and accomplish work on a schedule based on the given budget. Here are the ways to deal with payment issues (Arain, 2012):

- Make late payment fees as a part of payment terms: one way to secure the payment for subcontractors work is to include a late payment fee in the contract.
- Release Payments according to the contract document.
- Negotiate with the client
- Agree on affixed payment schedule
- Document the invoices and other supporting documents
- Good communication

A contract or subcontract may also include dispute resolution methods, which can be used tosettle disputes on payments and, if necessary, the contractor or subcontractor may take legal actions to enforce payment. However, much time, effort and cost would need to be paid to obtain payments through such means, and payments, if any, may come too late by which time the contractor or subcontractor might have suffered from other losses (Francis, 2006).

2.6.6 Health and safety issues

There is a high degree of accident and fatality in the construction industry compared with other industries.so occupational health and safety is a vital feature that needs deep consideration in a construction project. Frequently on huge and complex projects the degree of accident increases among contractors and their workers including their subcontractors (Arain, 2012).

There is misunderstanding about which party is really accountable for occupational safety in construction sites (Kish, 1965). As the general contractor is responsible for all movement in the site it is also responsible for managing the safety of its own employees as well as the workers of the subcontractors employed in the project. The client and project engineers should have an influence on the safety practices on the construction site (Chiang, 2008).

2.6.7 Time overrun and cost overrun

The issues with time and cost overrun will give an immediate effect to the owner and the stakeholder of construction project as well as contractor sub-contractor relation (Olawale, 2010). Sambasivan (2007) states that time overrun occurs when a project exceeded the original completion time as per contract or the project execution is beyond the actual deadline. The five main reasons that lead to this problem as listed by project owner are incomplete drawings, poor planning process, poor leadership that lead to late decision, poor relation between project parties, increase in the materials cost and excessive change and disputes (Endut, 2008).

2.6.8 Poor construction work quality

Quality is a set coordinated to control all the activities in construction industries to provide the effectiveness and the efficiency of the construction performance (Chan, 2006).

Quality output is fundamental for all sectors particularly in the construction industry as it is hard to achieve and requires a special quality control technique. A good plan and systematic management by the construction company will improve the construction quality to meet the client requirement (Mudzvokorwa, 2016).

Most poor construction quality occurs due to the lack of proper communication. The poor communication and low productivity leads to relationship problem between7 main contractor and subcontractor and affect overall quality (Rahman, 2013).

2.7 Influence of subcontractor on the main contractor's competiveness

Competitiveness is the ability of the company to compete with its competitors. A contractor's competitiveness refers to its ability to provide products and services in a more effective and efficient way than its competitors and achieve and sustain superior performance in the industry (Tserng, 2002).

According to Benjaoran (2015) there are many competitiveness factors of contractor companies that can be used to enhance a company's competitiveness such as project management, organizational structure, competitive strategy, relationships, supply, marketing, corporate image, technical and technological capabilities, as well as financial capabilities.

Nowadays, lots of building construction companies are trying to improve their efficiency in the constructive processes, which ended up contributing to a reorganization of company structure through the definition of a competitive strategy (Abdullahi, 2014). According to Benjaoran (2015) one of the strategies adopted by companies is subcontracting, which can reduce some activities in the construction process, with the transfer of a significant part of the work to third parties.

Trying to position in a competitive way inside the construction industry sector, a lot of companies have been adopting strategies about labour organization that privilege subcontracting (Daniel, 2007). The process of subcontracting is an efficient and economical means of accessing necessary resources. Subcontracting gives an advantage to firms by minimizing the number of workers they must employ. Through subcontracting, the risks of prime contractors are reduced as errors in estimating added costs caused by delays or extra workforce requirements are assumed by the subcontractors (Al-Imam, 2012). The quality of work the subcontractors deliver affects the performance as well as the competitiveness of the main contractors (Akintan, 2013).coming

Main contractors practiced subcontracting for a variety of reasons. The primary reason for subcontracting work is that the average prime contractor is not able to afford the cost of the full-time employment of skilled workers in each of the several specialized trades needed to complete construction projects. Also, it is not possible for companies to own, operate, control, and maintain specialized plants and equipment as these generally receive limited usage on a typical project. Because of these unique skills, subcontractors are able to execute their specialized work tasks more efficiently and at a lower cost than prime contractors (John, 1991).

Below are introduced some of the advantages obtained or positive impacts on the contractors' competitiveness when using competent subcontracting (Tayeh, 2019):

- Increases Flexibility: flexibility means the capability of the firm in responding to market changes. Subcontracting practice improves the flexibility (the workers' functions), of volume (number of workers) and financial of the company (smaller fixed costs).
- Reduction of delays: subcontracting helps to deliver projects on the specified time.
- Increases productivity: subcontractors present a larger productivity when compared with the company's own labour force because subcontractors are specialized in certain services. This is due to their experience which come from repetition and learning.
- Elimination of Sub-used Labour and Equipment Maintenance
- Easiness in costs control: the use of subcontractors with contracts of fixed price facilitates.
- Improves the product's quality: subcontractors used workers which specialize and qualified in a specific task which results better quality products. However, subcontracting sometimes results low quality products due to coordination and relationship problems.

Dossick (2009) emphasizes that arguments and misunderstandings between main contractors and subcontractors often results strained contractual relationship between the two parties. Frequent occurrence of conflict and disputes in construction projects affects the efficiency and competitiveness of construction industries (Mignot, 2011).The ability of the main contractor and consultant to deliver the project within time, quality and cost depends largely

on performance of subcontractors (Enshassi, 2006). Subcontractors also lead to the probability to breach contract which result in project delay and dispute with the main contractor. Therefore, subcontracting may the significance factors which causing delay (Hinze, 1994).

2.8 General solutions for contractual relationship problems

- Good communication and balanced exchange of information between main contractors and subcontractors have a vital role in providing good relationship (McCord, 2010).
- Using dispute resolution methods: prevention and early resolution of disputes is important for eliminating conflicts among parties. Arbitration, mediation, adjudication and dispute resolution boards are the main dispute resolution methods (Board, 2019).
- Good coordination: Contractors and subcontractors should perform in coordination to solve mutual problems (Andy, 2010).
- Selecting experienced subcontractors (Enshassi, 2006).
- Main contractors should release payments on time to the subcontractors (Arain, 2012).
- Supply and store the required materials early to ensure the continuity of the works and avoid the shortage of materials on site (Arain, 2012).
- Fairness is necessary in order to build trust among parties. Therefore, it is crucial to have a more reasonable distribution of project risks between the main contractor and subcontractor to engender trust (John, 1991).
- Proper planning: Planning for problem solving should be collective encouraging partnership between the parties (Fah, 2006).
- Improving management systems: Main contractors should give enough attention in order to develop more efficient and effective site management and coordination which is important to improved subcontractor performance in construction projects (Andy, 2010).
- Eliminating the imbalance of power existent in the relationship: Imbalance of power between main contractors and subcontractors can be removed by creating partnership based relationship that are based on common objectives and impartial contracts (Thomas, 2011).
- Improve documentation: The documentation between main contractors and subcontractors concerning on designs, drawings, plans, schedules and management systems should be strong and complete (Garavelli and Albino, 1998).

- Subcontractor should possess high quality material and assign sufficient experienced labour (Garavelli and Albino, 1998).

2.9 Housing projects in Addis Ababa

A condominium is a multiple-unit dwelling in which there is separate and distinct ownership of individual units and joint ownership of common areas.In Ethiopia the concept of condominium house as a separate form of ownership was not familiar until 2003 (Ebisa, 2014). Martha (2006) defined a condominium as "a building for residential or other purpose with four or more units and common elements, in high-rise building or a row of houses and includes the landholding of the building". The concept originated from Europe and then was resettled to the United States.

Lowcost housing project was established in Ethiopia based on bilateral agreement between Ethiopian and German governments to provide technical, managerial and financial support. German Agency for Technical Cooperation- International Services (GTZ- IS) was delegated to support the program in technicaland managerial aspects whereas KfW and DEG provided financial support (GTZ-IS, 2005). The collaboration's aim was to develop a "simple technology to promote housing construction". While the subsequent 'Low-Cost Housing' project (LCH) eventually aimed at a larger scale,its first phase (1999-2002) was predominantly focused on testing housing construction through the so-called'LCH technology'. It was mainly implemented as two story buildings on test sites located in the regional state of Tigray and the city of Addis Ababa (Sascha, 2014).

Addis Ababa Integrated Housing Development Program was developed after successful completion of ''Bole Gerji pilot apartment''s construction conducted in the years 1999-2002 (Sascha, 2014).In 2005, the government of Ethiopia considering provision of houses as one of the major developmental tasks to reducing poverty and improving the livelihoods of slum dwellers; and thereby bringing sustainable socio-economic development, established a National Integrated Housing Development Program under the MWUD later renamed as the Ministry of Urban Development, Housing and Construction (Ministry Of Urban Development Housing and Construction (MUDHC), 2005).

Integrated Housing Development Program established in order to reduce shortage of housing and provide a house that meets the minimum standards (kitchen, toilet and bath facilities) to low and middle income people (Ebisa, 2014).This program standees with the objective of increase housing supply for the low-income population, recognise existing urban slum areas and mitigate their expansion in the future, increase job opportunities for micro and small enterprises and unskilled labourers, which will in turn provide income for their families to afford their own housing and improve wealth creation and wealth distribution for the nation (Sascha, 2014).

The Integrated Housing Development Program is entirely financed by public resources. This program was originally funded by the city government's own account. After three years, however, it became necessary to consider a new strategy. The new approach came in the form of the regional and city administration purchasing bonds from the Commercial Bank of Ethiopia, secured under a bond agreement and paying them back over five years (UN-HABITAT, 2011).

All construction materials for condominium projects were purchased by MoWUD. Main contractors are engaged on fixed-cost contracts, which reduce the burden of soliciting for, receiving, and choosing tenders for each job (Hiwot, 2012). The material requirements for each condominium block are calculated and approved by the consultant and the estimated material quantities are given to main contractors. This centralized system minimizes wastage, helps to know material supplies and distribution, and enables any surplus materials to be used on other sites (Shimelis, 2018). The construction of infrastructure elements including roads, parking areas, foot paths, green areas and services like water suppling lines, electricity, and main sewerage connection for each unit are coordinate and financed by the city administration (UN-HABITAT, 2011).

According to the Ethiopian Housing Development Agency (EHDA) (2015), in all regions, condominums have been transferred to their owners by way of a computer based lottery system. When registering for the lottery, applicants choose condominium unit type. After awarding of the houses, beneficiaries enter into a contractual loan agreement with the CBE on the basis of monthly interest and principal repayments (Sascha, 2014).

Condominium unit beneficiaries are required to make a down-payment out of their own savings to secure their unit. The down-payment percentage varies according to unit type. Recently, the government implemented a housing project in Addis Ababa which is divided into three different groups based on payment modalities: 10/90, 20/80, 40/60. The beneficiaries save 10% for 10/90, 20% for 20/80 and 40% for 40/60 type and the remaining 90%, 80% and 60% respectively will pay by long-term mortgage plan (Ebisa, 2014).

Recently 20/80 construction of condominium houses are large in amount from the total condominium projects. The housing scheme with a 20/80 percent payment is being introduced by the government for citizens with middle incomes who can make a down payment of 20 % of the home price before acquiring their house and the remaining 80 % within a specific period (10-20 years) that will be disclosed by the administration when the project is launched (Martha, 2006). This types of condominiums have four or seven stories and constructed with four different types of typologies; S-Linear, S-L-shape, O-Linear and O-L-shape which differs on their design. Each unites incorporated eight independent houses with Studios, 1-bedroom unit types, 2-bedroom unit types and 3-bedroom unit types. Currently 20/80 condominiums are constructed by AAHDC in seven sites which are Koye Feche ,Furi Hanna, Bulbula, Bole Arabsa, Berket & wotader, Fanuel and Yeka Tafo (AAHDC, 2019).

2.9.1 Performance of 20/80 Housing Projects in Addis Ababa

Project performance can be measured and evaluated using a large number of performance indicators that could be related to various dimensions (groups) such as time, cost, quality, client satisfaction, client changes, business performance, health and safety (UN-HABITAT, 2011).

There are many factors that contribute to causes performance problems in construction projects. A number of studies have been carried out world wide to determine the cause of performance problem in construction projects. Soon (2007) have identified that contractor and subcontractor related problems are mostly result performance problem on projects.

In Addis Ababa 20/80 housing projects there is poor performance of project which contribute to low quality housing in relation to physical aspects such as structural failure, wall cracking,

and sanitary and electrical installation problems (Hiwot, 2012).According to UN-HABITAT (2011) study the program aims to produce low-cost but not low quality housing. However, there are concerns over the quality of the built environment, in particular the quality of construction finishes and infrastructure. This poor project performance mainly comes from problem of well function of stakeholders, especially problem between main contractor and subcontractors (Hiwot, 2012). High total cost and down payment, low income of households and increase price of construction materials and transports are some challenges of condominium houses (Sascha, 2014).

There are often problems like higher project costs, delays, low quality and poor function of the final product which come from bad contractual relationship between main contractor and subcontractors in 20/80 housing projects . This shows that contractor and sub-contractor performance have a direct impact on project performance (Hiwot, 2012).

Beside construction quality, construction delays are a major problem facing the condominium program. The productivity of the construction phase has not been as efficient as planned during the program's implementation thus far due to lack of adequate infrastructure, material shortages, poor construction management, etc. (MUDHC, 2005). The UN-Habitat (2011), reports that approximately 50% of condominium sites are behind schedule because of delays in the building of infrastructure.

2.9.2 Subcontracting practice in 20/80 Housing Projects in Addis Ababa

AAHDCPO is the responsible body for the administering and regulating the whole of the work in the project. The project office on site is responsible for the follow up and administration of the specific site under the supervision of head office. In addition to the client the main participant who are involved during the construction phase are main contractors, subcontractors and consultants (Ebisa, 2014). 30-50% of the construction works in AAHDCPO accomplished by subcontractors. Subcontractors are two types domestic and nominated. Domestic subcontractors are subcontractors appointed by the main contractor at his discretion.The nominated are MSEs (medium and Small Enterprises) which are the other major role player in the project. The nominates are two types, the first types are responsible for installation works (MSE 1) such as electrical and sanitary works, fix metal window and

door frames, roof works, fixing of agroston and handrail works. The second types are manufacturer (MSE 2) which provides prefabricated building components in the projec and they have no direct contact with the main contractors rather they are worked with the client directly (Hiwot, 2012).

According to FIDIC sub-clause 4.3 Conditions of Subcontract, ''the main contractor is the sole responsible entity for the subcontractor he has hired, the contractor himself will make sure the works executed by the subcontractor is in accordance with the contract requirement and the best engineering practice.'' In case of 20/80 condominium housing projects domestic subcontractors like plasterers, masons, painters, floor finishers, and carpenter and bar benders are completely under the control of main contractor. Nominated subcontractors in this case MSE 1 are assigned by the client, the main works contract is signed by three parties (client, main contractor and MSEs).The contract is a labour contract because the material is supplied by the client, and the contractual agreement is based on a fixed unit price (Hiwot, 2012). Main contractors are responsible for taking material from the client and distribute to the MSE1 .They are entitled to 5% of management fee for managing the subcontractor (MSE-1) under his supervision (AAHDC, 2019).

2.10 Chapter summary

This chapter presented a review of relevant literature on contractor- subcontractor contractual relationship in the construction industry. The main reason for literature review is to study contractor- subcontractor contractual relationship from the others either developed or developing countries experience, to adapt the best subcontracting experiences for construction of 20/80 condominium houses, to identify the nature of contractual relationship of main contractor and sub-contractor, to know the gap on the researches and fill in this research.The literature contains nine sections which were in depth reviewed to have a basic understanding of the research objective.

Based on this, the first part of the literature review introduced general ideas about main contractor and sub-contractor and working relationship of these two parties. The second part of the literature talks about the major construction parties involved in construction projects, which are employer/client/, consultants, main contractors and subcontractors.

The third part of the literature review gives the general concept about subcontracting practice in the construction industry, approach to subcontracting in different standard forms of contract and about types of subcontractors. According to the literature subcontractors may classified as specialists subcontractors, generalist and specialist trade subcontractors and labour-only subcontractors. From contractual point of view they divided in two three, which are domestic, nominated and selected. The next section which is the fourth section is about concept of working relationship between construction parties.

The fifth part of the literature discusses and identifies the major criteria's or factors used for selection of sub-contractors. These factors or criteria includes the quality of production, efficiency, price, employment of qualified members, reputation of the company, accessibility to the company, completion of the work on time, past experience, financial strength, working relationship, technical knowledge and current work load.

Main contractor and sub -contractor relationship issues and factors which lead to relationship problem is the sixth section of this chapter. This section tries to show the major issues arise between main contractor and sub-contractor identified from different studies. In the literature review it was identified that coordination issue, contractual issues, management problem, design problem, payment issues, time and cost overrun problems were included. lack of communication, poor project scheduling and planning, multi-layer subcontracting, delay in providing materials and frequent absence of main contractors from the site were identified as the main causes for coordination problem and also ambiguities in contract terms, errors and omissions, unclear payment terms and termination for convenience were the main cause for contractual issue between main contractor and subcontractors. According to different researches payment issue also arise due to clients hold payments and poor financial management, contractor's financial difficulty, pay- when-paid practice and disagreement on the valuation of work done. This section also discussed the nature of payment practice between the main contractor and subcontractor.

The literature review also showed how subcontractors are a necessary resource in the construction industry and also how subcontracting can give rise to various issues and if not done accordingly. The seventh section is about impact of subcontractors on main contractor's competitiveness. The literature identifies that increasing of main contractor's flexibility,

reduction of delay, improving productivity, and elimination of sub-used labour and equipment maintenance and improvement of products quality are the main advantages of subcontractors for the main contractor competitiveness. Under this section the literature identified that there is also draw back of subcontracting if not implemented properly. Moreover, it gave emphasis on the various reasons that contribute to contention between subcontractors and main contractors.

The last section of the literature reviews is about general overview of housing projects in Addis Ababa and subcontracting practice in such projects. The literature identifies that construction of condominium houses were stared since 1999 up-to-date. Know a day's condominium housing projects are implemented in different groups based on payment modalities which are 10/90, 20/80 and 40/60.Diffrent studies shows that AAHDC highly supports subcontracting and large amount of subcontractors are participated in those projects, however there is misunderstanding with the main contractors. This misunderstanding and dispute always affect the performance of condominium projects.

During the literature review there are researches in our country which are related with subcontracting and subcontractor performance, but there is no research related with contractual relationship between main contractor and subcontractors particularly in 20/80 condominium houses, therefore the research tries to fill the gap by giving emphasis on working relationship between main contractor and subcontractors and their impact on main contractor competitiveness in Addis Ababa 20/80 condominium houses. The next chapter discusses the research methods used in this study. It also discusses the justification of chosen research methods used in the research.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter presented reviewed literature on contractor-sub contractor relationship regarding with selection criteria, coordination issue, contract, payment practice and other factors which results relationship issues. Also it discussed about impact of sub-contractor on the contractor competitiveness and finally general solutions to interface problems, proposed by various researchers. This chapter presents methodology adopted throughout the research project. The methodology includes information about research approach, research design, selection of sample, source and data collection approach, questionnaire and interview design, questionnaire content, and the method of data processing and analysis.

3.2 Research Design

The research design is the conceptual structure within which the research is conducted. It includes data collection, measurement and analysis (Kothari, 2004).

Research design fundamentally refers to the strategy or plan for scientific investigation. It shows how the study is to be carried out, where the data comes from, what sort of data gathering techniques are used, and how the information is to be analyzed (Fellows, 1997).

This research was designed in order to address the problem identified in the previous chapters and achieve the objectives stated. Figure 3.1 illustrates the framework or steeps by which the research was conduct.

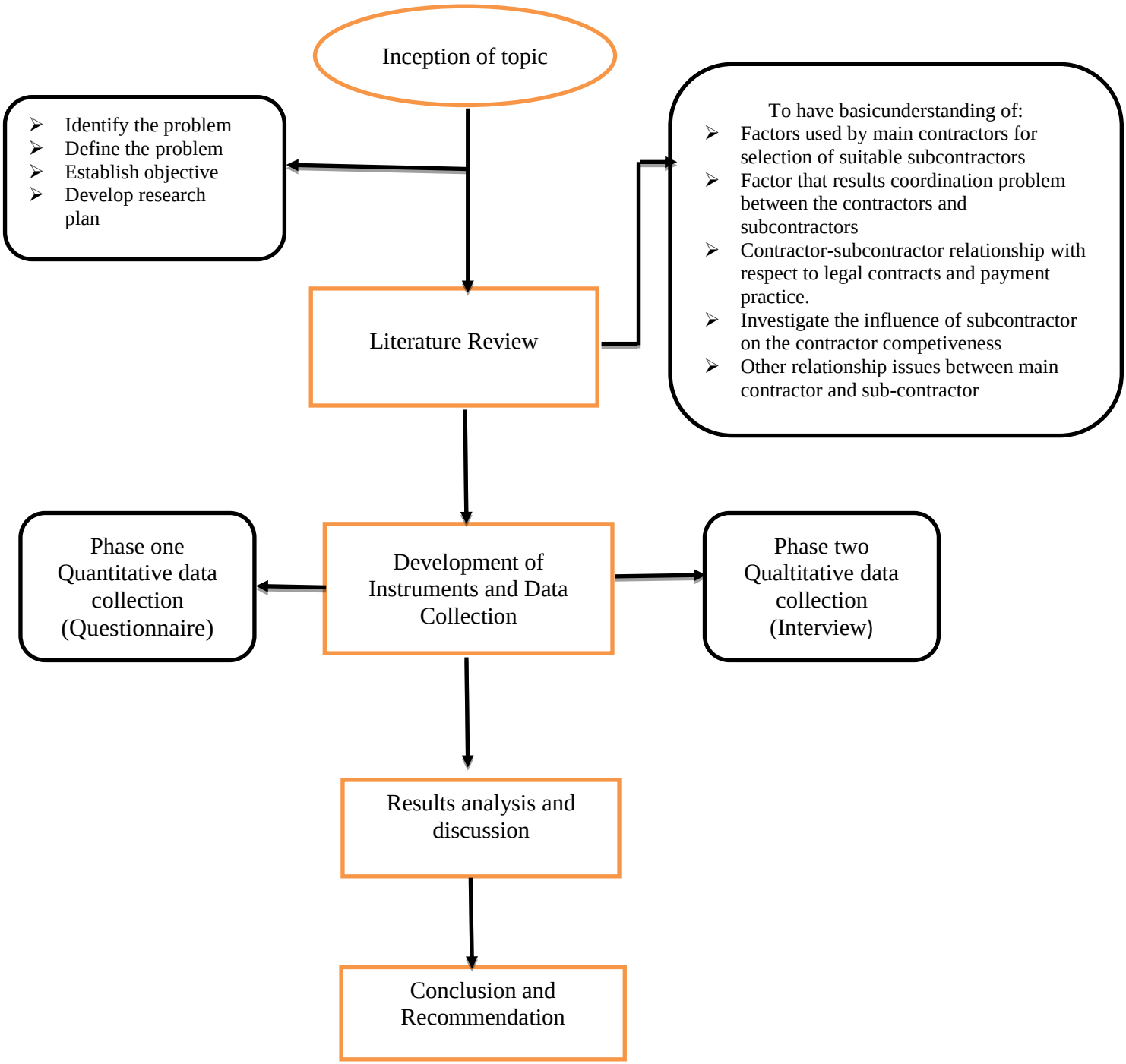


Figure 3.1: A Framework how the research is conducted.

3.3 Source of Data and Data collection approach

The data collection approach is concerned with the types of evidence to be collected and the sources of such evidence, as well as the process of interpretation used to obtain satisfactory answers being posed (Matthews, 2000).There are three basic approaches to research, quantitative approach, qualitative approach and the mixed approach. Quantitative research is a study where purely quantitative data and analysis techniques are adopted. It involves the generating of numerical data or data that can be transformed into useable statistics in order to explain, predict, and/or control phenomena of interest. While qualitative approach makes use of purely qualitative data and analysis. It attempts to maximize objectivity, replicability, and generalizability of findings and is normally interested in prediction. The mixed approach on the contrary adopts the combination of both quantitative and qualitative approaches (Kothari, 2004).

This research has involved both qualitative and quantitative characteristics. As a method of quantitative data collection, the questionnaire is a very flexible tool that has the advantages of having a primary data, a structured format, easy and convenient for respondents, and quick to administer to a large number of cases covering large study areas.

Besides the questionnaire an interview which is a qualitative data collection instrument was also conducted in order to get individuals perception and lived experiences. One-to-one interview was conducted with selected individuals represented major contracting parties and actively participated at different responsibility levels. In addition to the primary data secondary data are gathered from journals, previous related studies and internet sources.

3.4 Design of the survey

3.4.1 Questionnaire design

One of the research instrument used in this research is questionnaire which was designed in such a way that it ensures to address the objectives of the study. The questionnaire was designed to be a close ended questions including with few comment spaces. These type of questions had a number of choices of possible answers and the respondents selected whatever they feel was most appropriate. The closed ended questions were also selected because they

are easier to assess and answer considering how busy the respondents were. It is prepared based on the literature reviewed, interviewing experts and by referring previous studies. For the addressing of all parties involved in construction, the questionnaires were prepared in Amharic and English. The questionnaire has six sections and can be referred from the Appendix.

3.4.2 Semi –Structured Interviews

While questionnaire surveys are relatively easy to organize they do have certain limitations, particularly in the lack of flexibility of response. Interviews are a type of survey where questions are delivered in a face-to-face with the interviewee asking questions. Interviews are more suitable for questions that require probing to obtain adequate discussion (Walliman, 2011). It also allows including or gathering data from respondents who were not able to write or fill the questionnaire properly.

Interview may be structured, unstructured and semi–structured.In this research semi-structured interview was conducted. A semi-structured interview refers to one that contains both structured and unstructured sections with standardized and open-format questions (Kothari, 2004). In the interview open ended questions were used for data collection and conducted with 11 senior main contractor and sub-contractor. The interview questions are attached in the appendices of this research.

3.5 Population and Sampling

3.5.1 Research Population

The targeted construction sites for this study are 20/80 Bole Arabsa condominium projects which are under construction by Addis Ababa Housing Development Corporation (AAHDC). Currently the Addis Ababa Housing Development Corporation has formed an independent project office responsible for each specific project. Under AAHDC there are 17 condominium (20/80) projects. One project have one consultant office, one client office, and several number of contractors and subcontractors (both nominated and selected /domestic/) as shown Table 3.1 below.

Table 3.1: Total population of parties involved in AAHDC 20/80 Condominiums

Source (Addis Ababa Housing Development Corporation /AAHDC/) May, 2019

No	Project Office(Client)	Site Name	Total No of Contractors	No of Contractors class(1-4)_	Name of Consultant
1	Akaki Kality	Koye Feche	108	29	Vertual, Perfect
2	Arada	Furi Hana & Bulbula	43	20	Telda
3	Gulele	Bereket and Wotader , Fanuel, Jemo gara	46	25	WSM, Tewodrose Tsegaye
4	Kolfe	Yeka Tafo	38	10	KBYT
5	Yeka	Arabsa	32	21	Elugi
6	Bole	Arabsa	32	25	Image
7	Lideta	Arabsa	43	25	Belese
8	Kirkos	Arabsa	31	19	Gatmets
9	Addis Ketema	Koye Feche	43	18	Misganaw
10	Nifas Silk	Gelan,Bashalde	36	13	Mekelakeya Constraction & Design
11	Project 11	Koye Feche	49	23	Dynamic
12	Project 12	Koye Feche	50	31	Nomy
13	Project 13	Koye Feche	52	20	SG ,MGM
14	Project 14	Goro Silase	39	15	Moges Desta
15	Project 16	Koye Feche	48	22	Yohannes Abay
16	Project 17	Koye Feche	55	28	Bereket Tesfaye
17	Project 18	Koye Feche	47	24	Life Consult

All projects under AAHDC except Bole Arabsa all are finalized and on the progress of delivery. It's difficult to find main contractors and sub-contractors for data collection in those completed projects. Therefore Bole Arabsa 20/80 condominiums which were active and under construction sites are used for this thesis. The targeted population for the data collection consisted of consultants, client office, contractors (categorized between grade 1-4 classes (GC/BC)) and subcontractors (Both selected & nominated) in 20/80 condominium projects of Bole Arabsa. Contractors with 1-4 class are selected due to three reasons. First

this type of contractors has good practical and administrative experience of subcontracting. Second they have a capacity of assigning a subcontractor. And third they have good working experience in Addis Ababa 20/80 Housing projects, according to AAHDC (2019) main contractors between grade 1-4 had worked more than one sites of 20/80 housing projects.

According to Table3.1, four project sites which are Yeka, Bole, Lideta and Kirkos are found in Bole Arabsa. Under those projects there are four client project offices, four consultants, and 90 contractors are registered. Sub-contractors are two types, nominated and domestic. Nominated subcontractors in the various types of work fields like (PVC window and glazing work, LTZ metal door and window work, electrical work, sanitary work and agroston walling) are found under each main contractor. One nominated subcontractor works under an average of 6 main contractors, so 15 nominated sub-contractors are found in each type of works. Unfortunately, there are no reports showing the exact number of selected subcontractors (Painter, Mason, Plasterer, Floor finisher, Carpenter, and Bar bender) in the projects. However after discussion with some main contractors and consultants, In the case of selected sub-contractors one sub-contractor works an average of under 10 contractors so 9 selected sub-contractors are find in each item of work.

Table 3. 2: Population data of the study

Group		Total Population
Client		4
Consultant		4
Main Contractor		90
Sub-Contractor	Nominated	15*5(type of sub-contractors) =75
	Domestic	9*6(type of sub-contractors)=54

3.5.2 Sample Size Determination and Sampling

A sample is a small portion of a population which give a fairly representative view of the whole population. The process of selecting just a small group of cases from out of a large group is called sampling (Walliman, 2011).

There are a number of sample size determination approaches. In this study formulas are applied to calculate a sample size. To determine the sample size for each population of contractors and subcontractors, (Kish, 1965) equation was used, which can be calculated from this formula:

$$n = \frac{n'}{\left[1+\left(\frac{n'}{N}\right)\right]} \text{ ... ...Equation 3.1}$$

Where:-

n' Is the sample size from infinite population, which can be calculated from this formula

$[n' = S^2/V^2]$ The definitions of all variable can be defined as the following:

n: sample size from finite population.

N: Total population

V: Standard error of sample population equal 0.05 for the confidence level 95%,

S^2: Standard error variance of population elements; $S^2 = P(1-P)$ maximum at $P = 0.5$

- The sample size for the Client and Consultant population can be calculated from the previous equations as follows:

  $$n' = \frac{S^2}{V^2} = (0.5)^2/(0.05)^2 = 100$$

  $$\text{No. clients} = \frac{100}{(1+\left(\frac{100}{4}\right))} = 4 \text{ Clients and consultants}$$

- The sample size for the main contractors' population can be calculated

  $$\text{No. contractor} = \frac{100}{(1+\left(\frac{100}{90}\right))} = 48 \text{ Main Contractors}$$

- The sample size for the Nominated and selected sub-contractors' population can be calculated

  $$\text{No. nominated S.} = \frac{100}{(1+\left(\frac{100}{75}\right))} = 43 \text{ Nominated Sub- Contractors}$$

  $$\text{No. selected S.} = \frac{100}{(1+\left(\frac{100}{54}\right))} = 36 \text{ Selected Sub-Contractors}$$

The sample for main contractors and sub-contractors is larger in this study than clients and consultants since the main contractors and sub-contractors were the main focus of this study. Following sample size calculation, for main contractor's simple random sampling technique was used as one of probability sampling method sample to sample populations from the total population. In simple random sampling technique, each member of the population has an

equal chance of being selected. Microsoft Excel was used for applying random sample selection method. For sub-contractors there were problems to use organized or grouped homogeneous targeted population in order to gather the required information. Then the better alternative way was purposively selected the more profession, experienced and volunteer people related to the issue to respond for the questionnaires and interviews.

After knowing of the sample size and population of client, consultant, main contractor and sub-contractor the prepared questioners were distributed.This means that the questionnaire had been distributed to: project manager, site engineer and forman from main contractors' side; electrical engineer, sanitary engineer, resident engineer and project coordinator from consultant; subcontracting organization owners from nominated and selected subcontractors' side and finally from the client side junior and senior officers were participated. A purposive sampling method was used to select the respondent of the questionnaire under the main contractor, sub-contractor, consultant and the client.

3.6 Validity Test

The instrument used for data collection in this study was pre-tested. The pre-testing was important for testing validity of the instrument and feasibility of data collection approaches. Validity indicates how valid the questionnaire is, and it is commonly used to measure the quality of the variable. Instrument validation of this research was done by using content analysis where each item of the instrument tested were analyzed carefully and checked so as to ensure that it is able to transfer the necessary message. Content validity involves evaluation of questionnaire in order to ensure that it includes all the items that are essential and eliminates undesirable items to a particular construct domain. This is confirmed using literature review and use of a panel to ensure that the questions in the questionnaire are 'essential', 'useful but not essential' or 'not necessary (Kothari, 2004).

To ensure the content validity of the research, literature review is used to select criteria or factors mostly used by the main contractor for selection of suitable subcontractor and other relationship factors related to coordination issue, legal contract and payment practice. Secondly, pilot study was done. Before the prepared questionnaire is distributed to the respondents it was distributing to experts having experience in the same field of the research

to evaluate the procedure of questions, method of analyzing the results and to test whether the questionnaire was relevant to study area, understandable, unambiguous and easy for respondent to understand or respond.

The piloting process was conducted through contractors, sub-contractors consultants and clients. Important comments and suggestions was collected and evaluated carefully. After agreeing that the questionnaire is effective and enough to measure the purpose that the questionnaire designed for then it was used to collect the data.

3.7 Method of Data Analysis

After collection of data, there must be processing and analyzing in accordance with research method specified. When data is collected it will need to be processed and analysed in accordance with the outlined research plan in order to answer research questions. Processing is basically the editing, coding, classification and organisation of collected data so that they are acquiescent to analysis. While analysis means the computation of certain procedures along with strategic searching for patterns of relationship that exist among data-groups (Kothari, 2004).

In this study data was continuously analysed using descriptive statistics; measures of central tendency using mean and frequency tables. The descriptive statistics is a method of analysis which provides a general overview of results. Frequency distribution, which shows the frequency of observation of each response to each variable under investigation, is used to analyse the result of some questions.

The data collected through questionnaire were analyzed and presented in the form of tables using SPSS (Statistical Package for Social Science) software version 20 and computer programs including Microsoft excel sheet. Mean value was used to rank factors based on frequency. The factors and their effects are measured using five-point Likert scale, where 1= strongly agree, 2= agree, 3=neutral, 4=disagree and 5=strongly disagree and calculate the mean score value for each factor that is used to determine the relative ranking. After determining the mean values for all variables described in the questionnaire, ranks were given based on their respective mean value of ratings calculated. A factor with smallest mean value

(approximate to 1) was ranked as first. The mean value (MV) was computed using the following formula: (Eq. 3.2)

$$M = \frac{1 * n_1 + 2 * n_2 + 3 * n_3 + 4 * n_4 + 5 * n_5}{\sum N} \ldots\ldots\ldots\ldots\ldots \text{Equation 3.2}$$

Where; M= average mean;

n_1 = Number of respondents for strongly agree (1)

n_2 = Number of respondents for agree (2)

n_3 = Number of respondents for neutral (3

n_4 = Number of respondents for disagree (4)

n_5 = Number of respondents for strongly disagree (5)

N = Total number of respondents.

The data collected through interview were analyzed by using content analysis. Content analysis is the study of recorded human communications such as dairy entries, interviews, books, newspaper, videos, text messages, tweets, Facebook updates etc. Being the scientific study of the content of communication, content analysis is actually the study of contexts, meanings, subtexts, intentions contained in the messages. In simple terms, content analysis is the analysis of what is being said, written or recorded (Harwood, 2003). So in this study the data collected through interview were summarized and analyzed with content analysis by using narrations and interpretations.

Therefore, information that will be obtained through these data gathering tools will be expected to be effective enough to address each research question.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter provides the analysis of the data collected through questionnaires, interview and literature review from professionals who are working for the client, consultants and contractors involved in AAHDC 20/80 condominiums. The principal purpose is to identify contractual relationship between main contractor and subcontractor and their impacts on the contractor competiveness in Addis Ababa 20/80 Bole Arabsa condominium project. The data are presented using appropriate data presentation tools.

4.2 Statistics of Respondents

A total of 135 questionnaires was distributed to the five groups of respondents in 20/80 condominium projects and 122 questionnaires were returned. This gives a response rate of 90% of total distributed questionnaires. Out of 135 questionnaires 48 questionnaires were distributed for contractors, 43 for nominated Subcontractors, 36 for selected subcontractors, 4 for client and 4 for consultant.

A total of 48 questionnaires were distributed to main contractors and 44 questionnaires were returned, which is 92% of the total number of questionnaires collected from the main contractor. From the respondent site engineers, formans, company owners, managers were involved.

There were 43 Questionnaires distributed for nominated subcontractors and out of those 40 questionnaires were returned, which covers 93% of total questionnaires distributed for contractors. Nominated subcontractors participated in this study mainly found in the field of PVC window and glazing work, LTZ metal door and window work, electric installation work, sanitary/plumbing/ work and agroston walling. When we come to domestic subcontractors 36 questionnaires were distributed and 30 of them are returned, which covers 83% of the total distributed. Painter, mason, plasterer, Floor finisher, carpenter, and bar bender were type of selected subcontractors available at the time of the study. There were four consultants and four clients participated in this study, one person from each offices

selected for questionnaire respondent. From the consultant resident engineer, sanitary engineer, electrical engineer and coordinator were participated. And from the client office senior and junior officers were included. Finally the responses of the questionnaire survey were coded in SPSS-20 and Microsoft Excel spreadsheet. Table 4.1 shows the total summary of questionnaire distribution.

Table 4.1: Summary of overall survey response level

Questionnaire Distributed and Returned			% of Return Vs Distribution
Stakeholder	Questionnaire Distributed	Questionnaire Returned	
Main Contractor	48	44	32.59
Nominated Subcontractor	43	40	29.63
Selected Subcontractor	36	30	22.22
Consultant	4	4	2.96
Client (Owner)	4	4	2.96
Total	135	122	90.37

4.3 Analysis and Discussion of Results

This section deals with the analysis (by using method of analysis which discussed on section 3.7) and discussion of the data gathered from both the questionnaire survey and the semi – structured interview.

4.3.1. General Background information

4.3.1.1 Category of Organization

There are 44 contractor and 4 consultants involved in the study. From the total contractor respondents half of the contractors are grade 4 (50%), seventeen contractors are grade 3 (38.6%), four contractors are grade 2 (9.1%) and only one contractor is grade 1(2.3%). When we come to consultants two of them are grade-2 and the rest two consultants are grade 3 and grade 1, as shown Figure 4.1 below. When come to sub-contractors, nominated

subcontractors are all categorized and have the licence of Micro and Small Enterprises (MSE).

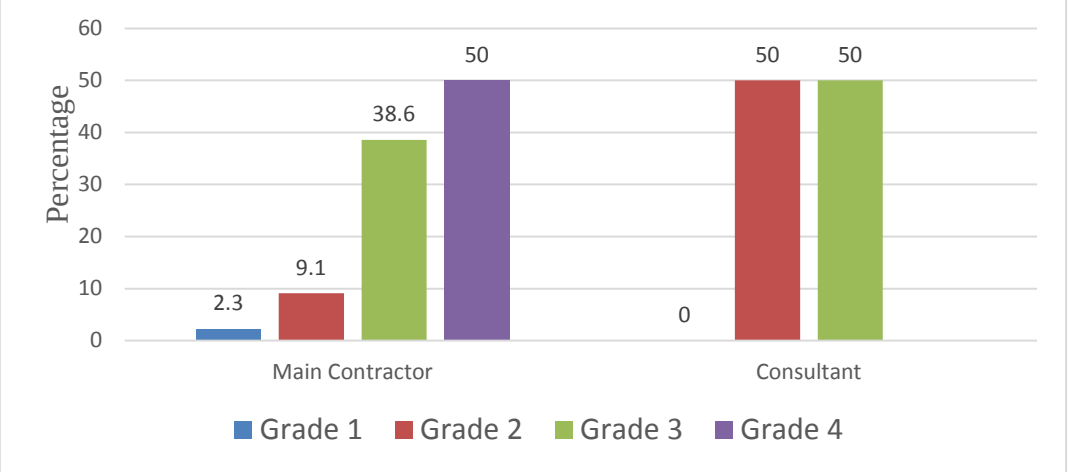


Figure 4. 1: Category of organization of respondents

4.3.1.2 Position of Respondents in the Project

Table 4.2 shows that there are four respondents from the client, out of them 1 planning and information officer, 1 junior officer and 2 senior officers are involved as shown on Figure 4.2.From the consultants 1 coordinator, 1 resident engineers, 1 sanitary and 1electrical supervisor are participated. Further, from the contractor 9 formans (20.5%), 6 owners (13.6%), 9 project manager (20.5) and 20 site engineers (45.5%) are participated.

Table 4. 2: Position of Client, Consultants and Contractors

Client			Consultant			Main Contractor		
Position	**Frequency**	**Percente (%)**	**Position**	**Frequency**	**Percente (%)**	**Position**	**Frequency**	**Percente (%)**
Planning and information Offier	1	25%	Coordinater	1	25%	Forman	9	20.50 %
junior officer	1	25%	Resdent engineer	1	25%	Owner	6	13.60 %
Senior officers	2	50%	Electrical Engineer	1	25%	Project manager	9	20.50 %

			Sanitary Engineer	1	25%	Site Engineer	20	45.50 %
Total	**4**	**100%**		**4**	**100%**		**44**	**100.10 %**

Three are two types of subcontractors involved in the study nominated and domestic subcontractors. From nominated sub-contractors 10 percent are worked on agroston walling, 22.5 percent are Electricians, 22.5 percent are worked on LTZ door and window work, 20 percent are worked on PVC window and glazing work and 25 percent are plumbers as shown on Figure 4.2.

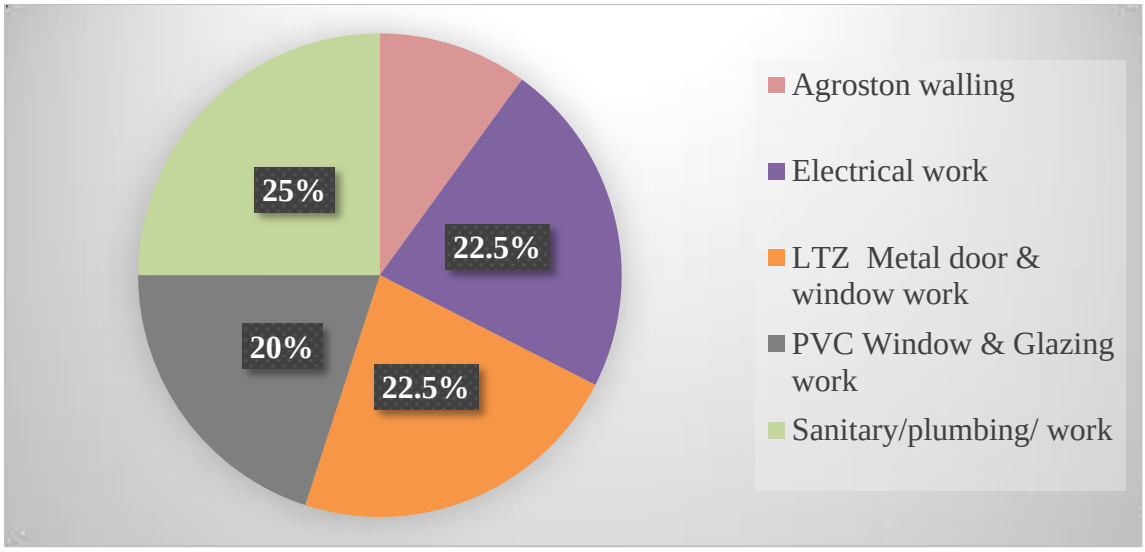


Figure 4. 2: Types of Nominated Subcontractors

Furthermore there are selected subcontractor respondents, 6.7% are bar benders, 10% are carpenters, 13.3% are floor finisher, 13.3% are mason, and 30% are painters and last plasterers cover 26.7% of the total (Refer to Figure 4.3).

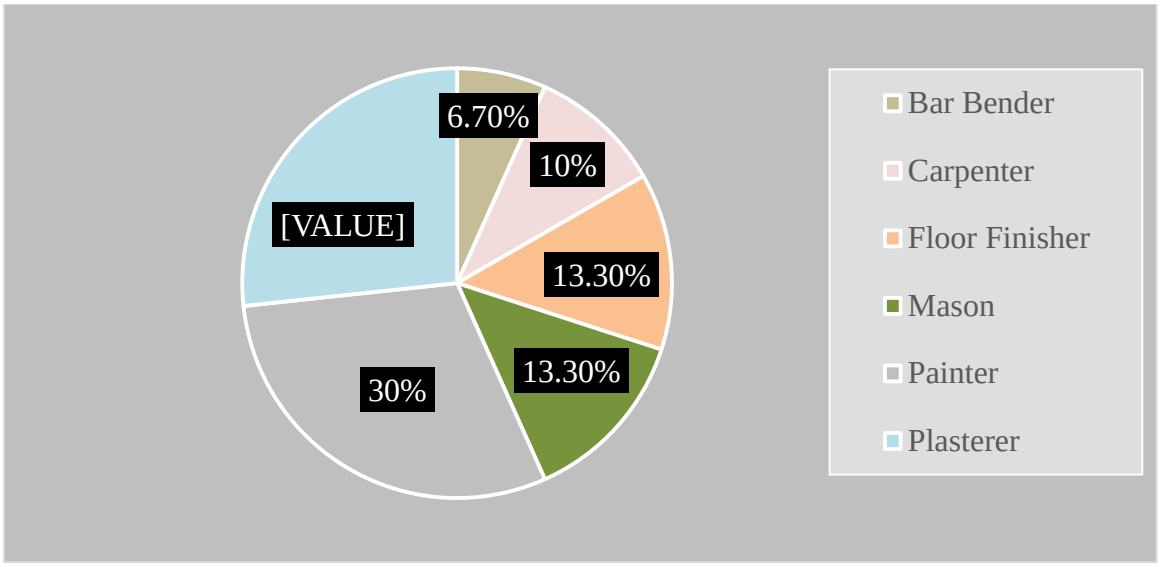
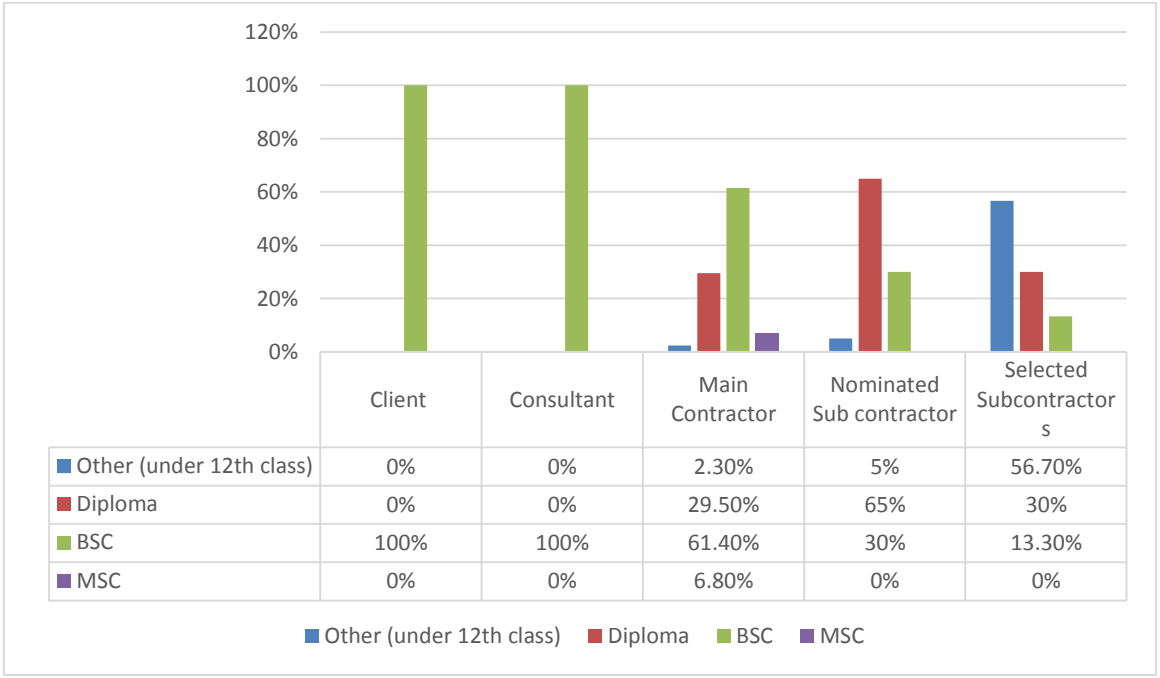


Figure 4. 3: Types of Domestic Subcontractors

4.3.1. 3 Level of education and Experience of Respondents'

Figure 4.4 below shows the education level of respondents' involved in the study



	Client	Consultant	Main Contractor	Nominated Sub contractor	Selected Subcontractors
Other (under 12th class)	0%	0%	2.30%	5%	56.70%
Diploma	0%	0%	29.50%	65%	30%
BSC	100%	100%	61.40%	30%	13.30%
MSC	0%	0%	6.80%	0%	0%

Figure 4. 4 Education level of respondents'

Table 4. 3: Respondents' Experience

Number of Years	General Experiences in Construction Industry					Specific Experiences in 20/80 Condominiums				
	Client	Consultant	Main Contractor	Nominated subcontrac	Domestic Subcontrac	Client	Consultant	Main Contractor	Nominated subcontrac	Domestic Subcontrac
0 to 3 years	25.0%	0.0%	4.5%	2.5%	0.0%	25%	25%	22.7%	17.5%	0.0%
3- 5 years	25.0%	50%	38.6%	47.5%	23.3%	25%	50%	45.5%	67.5%	33.3%
5-10 years	25.0%	50%	25.0%	5.0%	26.7%	50%	25%	20.5%	5.0%	53.3%
10-15 years	25.0%	0.0%	27.3%	22.5%	30.0%	0%	0%	11.4%	10.0%	13.3%
Above 15 years	0.0%	0.0%	4.6%	22.5%	20.0%	0%	0%	0.0%	0.0%	0.0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 4.3 above shows respondents' general and specific work experience in the construction industry and in Addis Ababa 20/80 condominium projects respectively.

4.3.2. Selection Criteria

The second section of the questionnaire is about criteria used by main contractors for selection of suitable subcontractors in 20/80 condominium projects. This criteria refers to the domestic subcontractors not nominated.The respondents were asked to rank the most used selection criteria using five points scale (Strongly agree, Agree, Neutral, Disagree and strongly disagree) and the results were identified from the returned questionnaires based on

the mean value (MV) of the four groups of respondents; contractor, domestic subcontractor, client and consultant. Based on a Likert-scale ranging from 1 strongly agree to 5 strongly disagree,In this study selection criteria with a minimum mean score are considered as the most common types of selection criteria by the respondents'. The resulte of research methodology of questionnaire survey for each selection criteria are shown below, Table 4.4.

Table 4.4: Selection Criteria

No	Factors used by main contractors for selection of suitable Subcontractors	Main Contractor		Selected subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Competitiveness of the subcontractor's tender price and item rates	1.82	3	1.1	2	2.37	6	1.76	1
2	Good working relationship with the Main Contractor and trust	1.7	1	1.13	3	2.62	14	1.82	2
3	Technical Knowledge	1.73	2	1.53	5	2.38	10	1.88	3
4	Past Experience	2.02	4	1.63	7	2.25	4	1.97	4
5	Current workload	2.27	9	1.43	4	2.37	6	2.02	5
6	Quality of production	2.43	17	1.63	7	2.12	2	2.06	6
7	Completion of job within the budget	2.29	12	1.07	1	2.87	22	2.08	7
8	Efficiency	2.39	14	1.53	5	2.62	14	2.18	8
9	Ability to manage resources	2.40	15	2.3	16	2	1	2.23	9
10	Cooperation	2.09	6	2	11	2.62	14	2.24	10
11	Suitability of financial capability	2.41	16	1.9	9	2.5	11	2.27	11
12	Completion of the work on time	2.25	8	2.07	13	2.63	18	2.32	12

No	Factors used by main contractors for selection of suitable Subcontractors	Main Contractor		Selected subcontractor		Client & Consultant		Weighted Average	
13	Construction method	2.89	27	2.03	12	2.25	4	2.39	13
14	Enthusiasm for the project	2.18	7	2.82	22	2.12	2	2.39	14
15	Ability to provide the necessary equipment	2.07	5	1.93	10	3.25	28	2.42	15
16	Adherence of the subcontractor to subcontract requirements	2.27	9	2.23	14	2.87	22	2.46	16
17	Collaboration with other subcontractors	2.66	23	2.43	17	2.37	6	2.49	17
18	Ability to handle the type, quality, size of Work	2.57	20	2.27	15	3	24	2.61	18
19	Innovation potential, development, opportunities for future work	2.87	26	2.5	18	2.5	11	2.62	19
20	Employment of qualified members	2.54	19	2.93	23	2.5	11	2.66	20
21	Reputation of the company/Subcontractor/	2.50	18	2.73	20	2.75	20	2.66	21
22	Sub-Contractor relation with construction technology and construction techniques	2.57	20	2.5	18	3	24	2.69	22
23	Human resource management	2.73	24	3.03	26	2.37	6	2.71	23
24	Not partnering the works to another subcontractor	2.27	9	2.77	21	3.12	26	2.72	24
25	Acceptability to the client	2.61	22	3	25	2.63	18	2.75	25
26	Services after work completion	2.79	25	2.97	24	2.75	20	2.84	26
27	Occupational health and safety	3.62	28	3.13	27	3.12	26	3.29	27

No	Factors used by main contractors for selection of suitable Subcontractors	Main Contractor		Selected subcontractor		Client & Consultant		Weighted Average	
28	Satisfying customer criteria,	2.36	13	5.93	28	2.62	14	3.64	28

As indicated in Table 4.4, the results show that main contractors consider the following five criteria to be important for the selection of subcontractors. Competitiveness of the subcontractor's tender price and item rates is regarded to be the most important selection criteria and followed by good relationship with the main contractor ,technical Knowledge, past experience/ Positive attitude/and Current workload .

The first ranked selection criteria in this research which is competitiveness of the subcontractor's tender price and item rates have a mean value of (MV=1.76) .Subcontractors who offered low bid prices help main contractors withstand their business and safeguard that the cash flow is positive.Dulaimi and Hong (2002) emphasize that based on the contractors' need to minimize cost and maximize profit, they are likely to select subcontractors who submit the lowest price. Arslan and Kivrak (2008) also emphasize that subcontractor selection is largely on the basis of the lowest tender. However, it may result in problems in quality of work, delay in project duration, create additional costs in construction projects and lead to serious money losses for construction companies in the long run. Hence, it can be negatively affected on productivity of subcontractors.

The second most important selection criteria in the study is making good working relationship with the main contractor with a MV of (1.82).Main contractors select subcontractors based on their pervious experiences of good working relationships. Good working relationship between parties needs trust,open communication,self-awareness and inclusion between them. Serdar (2017) says that both main contractors and subcontractors tend to over-rely on construction working relationships, since they believe that better communication relation reduces the risk of misunderstanding.

Technical knowledge with a MV of (1.88) is the third most important criterion contribute to the attractiveness of a subcontractor in this study. It represents the ability to discover suitable

solutions for the problems in a timely, quality-effective, and cost efficient manner. Subcontractors with technical knowledge anticipate and solve different problems during the project. That does involve identification and usage of appropriate working methods and technical equipment. Dulaimi and Hong (2002) emphasize that subcontractors with technical knowledge enables the development of technical competence and technical expertise and, consequently, the use of correct working methods to competently handle machines and equipment.

The fourth selection criteria identified in the study is past experience of subcontractors which have a MV of 1.97. A subcontractor experienced in undertaking projects of a similar type would seem to require less risk premium, which is in turn resulted in less cost, because subcontractor is likely to have greater confidence in completing the project in accordance with the client's brief (Serdar, 2017).

The last selection criteria from the five most used criteria is 'current workload'' with a MV of 2.02. Serdar (2017) emphasize that numbers, types, locations, and scales of current/planned projects and completion percentages of current projects are investigated under this criterion. Current work load leads subcontractor to be highly willing to get the job and to focus on the project.

4.3.3. Coordination issues

The third section of the questionnaire is about factors that causes coordination issues between main contractor and subcontractor in Addis Ababa 20/80 condominiums. This section have two sub sections the first section focused on cause of coordination issue between nominated subcontractors and main contractors and the second section deals on ways to improve this problem.

4.3.3.1 Causes of coordination issues

In this section the respondents were asked to rank the most common factors that cause coordination issue between main contractors and nominated subcontractors shown below, Table 4.5.

Table 4.5: Common factors that cause's coordination issue

No	Common factors that causes coordination issues between the contractors and subcontractor	Main Contractor		Nominated subContractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Client delay in providing requirements drawings and supplying materials	1.47	1	1.77	6	1.87	3	1.7	1
2	Planning & Scheduling conflicts among the subcontractors and main contractor.	2.04	4	1.92	8	2	4	1.99	2
3	Frequent absence of the main contractor from the site	2.59	15	1.57	1	2.25	7	2.14	3
4	Lack of communication	2.34	13	2.47	2	1.62	16	2.15	4
5	Multi-layer subcontracting	2.13	5	1.75	4	2.62	15	2.17	5
6	Involvement of the sub-contractor in many projects at the same time	2.22	7	2.22	13	2.25	7	2.23	6
7	Self-interests	2.45	12	1.77	6	2.5	9	2.24	7
8	unable to provide proper security for the site and plant	2.47	9	1.67	16	2.65	1	2.26	8
9	Lack of Trust	2.63	16	1.75	4	2.5	9	2.29	9
10	Interaction of the work of subcontractors, which lead to delay	2.5	14	2.3	15	2.12	6	2.31	10
11	Client delay in releasing payments to the main contractor & sub-contractor	1.75	2	2.05	10	3.12	19	2.31	10

No	Common factors that causes coordination issues between the contractors and	Main Contractor		Nominated subContractor		Client & Consultant		Weighted Average	
12	Access to technical and managerial knowledge	2.43	11	2.07	11	2.5	9	2.33	12
13	Involvement of the main contractor in many projects at the same time	3	19	1.67	2	2.5	9	2.39	13
14	Delay by the main contractor in providing the necessary material	2.15	6	3.42	20	1.62	1	2.4	14
15	Lack of Collaboration/team work/	2.63	16	2	9	2.75	17	2.46	15
16	Shortage of skilled labour with the sub-contractor	2.27	8	3.17	19	2	4	2.48	16
17	Neglecting the instructions of the main contractor	2.4	10	2.77	18	2.5	9	2.56	17
18	Low experience and low capability of the main contractor	2.7	18	2.57	17	2.5	9	2.59	18
19	Giving instructions by the client to the subcontractor directly without notifying the main contractor	3.56	20	2.1	12	2.75	17	2.8	19
20	Lack of regular meetings to review progress	1.81	3	2.25	14	4.75	20	2.94	20

Results from Table 4.5 reveals that the top five factors that cause coordination issue between main contractor and sub-contractor are:

1. Client delay in supplying materials to the subcontractor as well as main contractor.

2. Scheduling conflicts among the subcontractors and main contractor.
3. Frequent absence of the main contractor from the site.
4. Lack of communication.
5. Multi-layer subcontracting.

Client delay in providing requirements, drawings and supplying materials to the subcontractor is the main cause of coordination issue between contractor and sub-contractor with a MV of (1.7). In Addis Ababa 20/80 condominium projects most materials like cement, HCB, reinforcement bar, PVC window frame, LTZ metal sections, window and door glasses, agroston boards, electric conduits, sanitary pipes, terrazzo tiles etc. all are supplied by the client. It is main contractors' responsibilities to take supplied materials on time from the client and delivered to both nominated and selected subcontractors, so delay of materials for subcontractors due to client and main contractor leads to coordination problems and conflict between main contractors and their subs on construction sites

The second factor that results coordination problem in this study is planning and scheduling conflicts among the subcontractors and main contractor with a MV of (1.99). Main contractors and sub-contractors should schedule their work packages together to meet the time estimated to complete their jobs. This will likely minimize the overall project delay which is important to the main contractor and hence reduce friction between the two groups.

This result is in line with Lagiman (2017) that poor project scheduling can cause a conflict between the main contractor and the subcontractor during the project construction. Huang (2008) also stated that planning and scheduling together is crucial for working in coordination and conducting all the activities on time. Dainty (2001) in his studies stated that one party's good construction planning and scheduling does not guarantee the success of the project but it can be a good guideline for every parties involved in the project to make good contractual relationship among them.

In this study the third cause of coordination issue b/n main contractor and subcontractor in Addis Ababa 20/80 condominium projects is 'frequent absence of the main contractor from the site' with a MV of (2.14).Many contractors worked in those projects frequently absence from the site and this results communication ,coordination and quality control problem. Dainty (2001) states that coordination and construction quality in the local construction

industry suffers in the absence of adequate control and supervision by main contractors over subcontractors' work

Lack of communication between parties puts on the fourth most factor which leads coordination problem between parties and in this study it have a MV of (2.15).This result is supported by Huang (2008) that some working relationship problems in the construction industry stem from the lack of ineffective communication between the project participants especially when subcontractor is not integrated into the main alliance. Lagiman (2017) also stated that clear communication can reduce any potential future problems that may arise, and this results proper coordination among all parties that include contractors, subcontractors, and consultants. The lack of communication can lead to working relationship problem between the main contractor and subcontractor. This idea also supported by Huang (2008), states that some communication problems have the ability to lead serious disorganisation, such as poor planning and scheduling and lack of updating of new information to the management system. Consequently, this leads to coordination factor. According to Enshassi (2006) concerning communication process between main contractors and sub-contractors, communications between these two parties are mainly informal but face to face communication was the main mean for communication.

The fifth factor that results coordination problem between main contractor and sub-contractor in this study is 'multi –layer subcontracting with a MV of (2.17). This is supported by Dainty (2001) in multi-layer subcontracting system it is often difficult to identify who does what and who is responsible for the quality of the work.it is also impossible to communicate and working together with the subcontractor . Single main contractor cannot possibly handle all related project tasks. Furthermore, the bottom-layer subcontractors are often contracted for unreasonably low bids. In order to make a profit, these bottom tiers have to use cheap or deteriorated materials, employ unskilled workers and engage poor workmanship, thus deliver inferior products and leads to bad relationship between main contractor and the upper sub-contractor.

4.3.3.2 Ways to improve coordination issues

In the previous section the main causes of coordination problems of main contractor and subcontractor was studied and in this section the ways of improving coordination problem were identified from the distributed questionnaire as shown below.

Table 4.6: Ways to improve coordination issue

No	Ways to improve coordination isuues	Main Contractor		Nominated subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	The client should provide the necessary requirements, drawings and materials early.	1.65	3	1.42	1	2.25	2	1.77	1
2	Balanced flow of information and regular meetings.	1.5	1	1.5	3	2.37	5	1.79	2
3	The main contractor should always available on site and coordinate the works of subcontractors.	1.54	2	1.47	2	2.37	5	1.79	3
4	Main contractors shall select experienced subcontractors.	1.81	5	2.27	5	2.12	1	2.07	4
5	Client or consultant should control over all working relationship of main contractors and subcontractors.	2.15	8	2.05	4	2.25	2	2.15	5
6	The parties should consider their financial conditions and plan carefully.	2	6	2.27	5	2.5	7	2.26	6
7	There shall be legal contracts, regulations and dispute resolution clauses before works are started.	1.65	3	3.05	7	2.25	2	2.32	7

8	Avoiding interference of the client between main contractor & subcontractor.	2.06	7	3.27	9	2.7	8	2.68	8
9	The main contractor should take all the risk of the subcontractor workers.	2.54	9	3.17	8	2.75	9	2.82	9

As outlined in Table 4.6, there are nine ways important for improving coordination issue between main contractor and subcontractor. From those nine factors five most ways are identified. 'The client should provide the necessary requirements, payments, drawings and materials early for the sub-contractor.' and 'balanced flow of information and regular meetings between main contractors and subcontractors.' were ranked first and second with a mean values of (MV = 1.77) and (MV = 1.79) respectively. The client and main contractors are recommended to provide necessary requirements, drawings and materials. This survey result is in line with the previous section 4.3.3.1, it was identified that the main cause of coordination issue is delaying in providing requirements, materials and drawings.

Also in order to solve problems immediately the survey result shows main contractors should communicate with their subcontractors continuously. But this result is not in line with the result found in section 4.3.3.1 which is planning and scheduling conflicts among main contractors and subcontractors rather it is much with 'lack of communication' which is ranked as the fourth cause of coordination issues. The two ways are followed by 'The main contractor should always be available on site and coordinate the works of subcontractors.' which ranked in the third position with a mean values of (MV = 1.79). This survey result is in line with the previous section 4.3.3.1, it was identified that the third most cause of coordination issue is 'frequent absence of main contractors from the site'.

The fourth and the fifth ways identified in this study are 'main contractors shall select experienced subcontractors.' And 'client or consultant should control over all contractual relationship of main contractors and subcontractors.' with a mean value of (MV=2.07) and (MV=2.15) respectively. This result is supported by Hinze (1994) which states that, absence of involvement of the subcontractor in similar projects will lead to poor coordination,

efficiency and poor work quality. These all contributed to delays in the work progress of the subcontractor and scheduled conflict among construction activities. So the main contractors should consider the experience of subcontractors during selection stage and should adopt proper systems to work together and procedures for selecting, supervising and managing them. The client and consultants should involve between the main contractor and subcontractor to eliminate misunderstandings, problems which are difficulty to work in coordination. In the previous section 4.3.3.1 the fourth and fifth ranked causes of coordination issue are 'lack of communication' and 'multi-layer subcontracting' which is not in line with the above results. According to 4.3.3.1 the fourth and fifth way of improving coordination issue must be improving communication between main contractor and subcontractors and avoiding multilayer subcontracting in the construction sites.

4.3.4. Main contractor and sub-contractor relationship with respect to legal contract

This is the fourth section of the questionnaire which deals about nature of main contractor and subcontractor relationship with respected to the contract that interred. It consists of three subsection which are 'nature of contract document between main contractor and subcontractor', 'situations that affect main contractor and sub-contractor relationship with respected to the contract document' and 'ways to improve main contractor and sub-contractor relationship with respected to legal contract and document'.

4.3.4.1 Nature of contract document between main contractor and subcontractor

On this section the nature of contract documents between main contractor and subcontractor in 20/80 Addis Ababa condominiums is studied. A total of twelve questions were included and questionnaire results are collected from main contractors, domestic subcontractors, consultants and clients. In this section nominated subcontractors were not participated due to their contract is directly with the client.

The first question is about 'types of contract mostly practiced between main contractor and subcontractor'. Results shown on Figure 4.5, 61% of main contractors, 68.6 % of domestic subcontractors and 62.34% of consultant and Client agree that main contractors and

subcontractors mainly started work without any written document or by using only oral agreements. 36.8% of main contracts, 31.4% of domestic subcontractors and 35.29 % of consultant and clients justified that there is written document between main contractor and subcontractors. Only 2.2 % of main contractors are interred contracts with subcontractors legally.

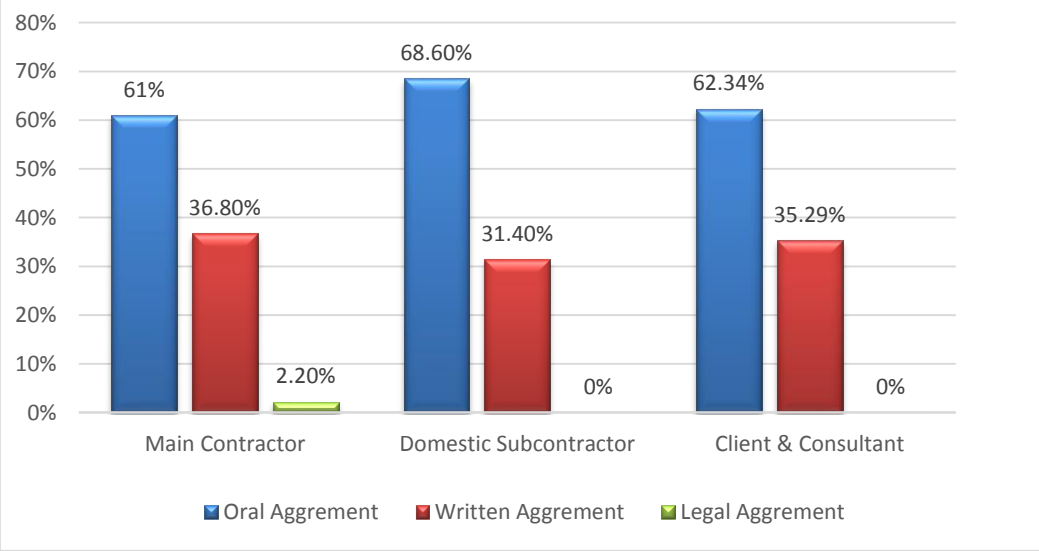


Figure 4.5: Types of contract Aggrement used b/n main contractor and subcontractor

When main contractors and subcontractors found in Addis Ababa 20/80 condominiums interred in an agreement the contract type may choose by the main contractor, sub-contractor or by both of them. In this study results shown on Figure 4.6 that 95% types of contract agreements are chosen by the main contractor and the resting 5% of the result shows sub-contractors decided the type of contract agreement. After selection of the contract agreement type, written documents are prepared by the main contractor.

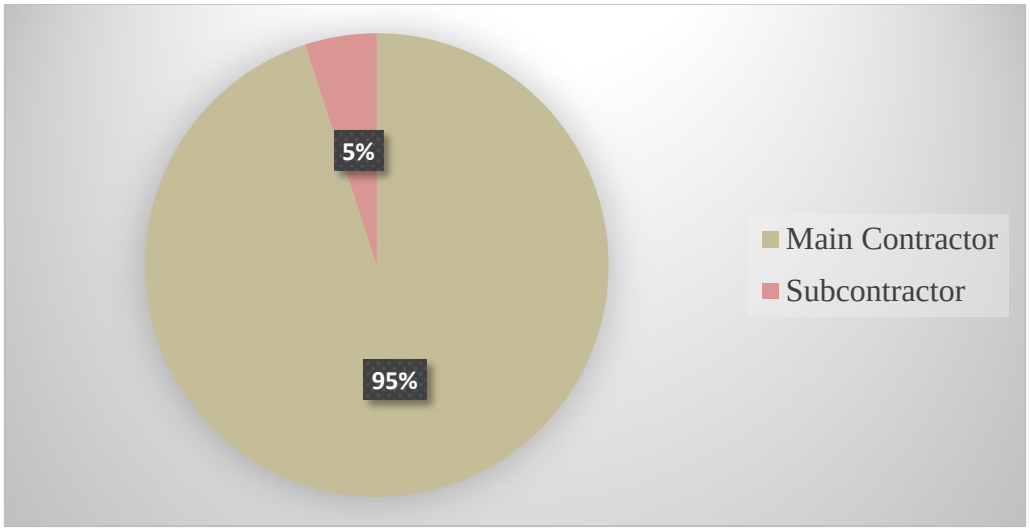


Figure 4.6: Choice of type of contract agreement used b/n main contractor and subcontractor

Table 4.7: Nature of Contract Documents between main contractor and subcontractor

Contract documents b/n Main contractors and Subcontractors consists of	Main Contractors				Selected Sub contractors				Client and Consultant				Weighted Average			
	Always	Sometimes	Never	Don't Know	Always	Sometimes	Never	Don't Know	Always	Sometimes	Never	Don't Know	Always	Sometimes	Never	Don't Know
Specification or contract condition	0%	2%	92%	6%	0%	0%	54%	44%	0%	0%	100 %	0%	0%	1%	82%	17%
Penalty condition	0%	0%	96%	4%	0%	0%	84%	14%	0%	0%	100 %	0%	0%	0%	93%	7%
Payment terms	86%	9%	3%	2%	90%	5%	5%	0%	86%	12%	2%	0%	87%	9%	3%	1%
Termination clause	0%	0%	97%	3%	0%	0%	62%	38%	0%	0%	93%	7%	0%	0%	84%	16%
Dispute due to contract document or oral Agreement	77%	15%	8%	0%	82%	10%	5%	3%	89%	11%	0%	0%	83%	12%	4%	1%
Dispute resolution clause	0%	0%	88%	12%	0%	7%	80%	13%	0%	3%	97%	0%	0%	0%	84%	16%

As the above Table 4.17 shows that 1% of the respondents says sometimes, 82% never and 17% don't know about using and applying of different specifications and contract conditions in the contract document between main contractor and subcontractor in Addis Ababa 20/80 condominiums. About penalty conditions in the contract document, 93% says that the documents never consist of any penalty conditions and 7% of the respondents don't know about it. When we come to payment terms; 87% of the respondents answered always, 9% sometimes, 3% never and 1% don't know about payment terms are included in contract document. In this study 83% of the respondents agree that disputes are always occurred due to contract documents, 12% sometimes, and 4% never happened and 1% don't know about it. In contracts agreements if there is dispute and misunderstandings, dispute resolution clauses are helpful to resolve it otherwise it leads to contract termination. According to respondents 16% don't know and 84% agree that there is no dispute resolution clauses as well as contract termination clauses in the contract documents between main contractor and sub-contractor in Addis Ababa 20/80 condominiums.

4.3.4.2 Main contractor and sub-contractor relationship problem due to contract document

In the previous section the nature of contract agreements of main contractor and subcontractor were studied. This section deals about the analysis and discussion of the questionnaire results about situations that affect main contractor and sub-contractor relationship with respected to the contract document as shown below, Table 4.8.

Table 4.8: Situations that affect main contractor and sub-contractor relationship with respected to the contract document.

No	situations that affect main contractor and sub-contractor relationship with respected to the contract document in AAHDC	Main Contractor		Selected subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Unclear payment terms	2.06	1	1.26	1	1.75	1	1.69	1

No	situations that affect main contractor and sub-contractor relationship with respected to the contract document in AAHDC	Main Contractor		Selected subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
2	Breaches of contract	2.22	2	1.26	1	1.85	2	1.78	2
3	Termination for convenience	2.27	3	1.33	3	2.37	3	1.99	3
4	Ambiguities in contract documents	2.52	5	1.56	4	2.5	4	2.19	4
5	Errors and omissions in the contract terms	2.40	4	1.8	5	2.75	8	2.32	5
6	Non-adherence to the conditions of the contract	2.56	6	1.93	7	2.5	4	2.33	6
7	Incomplete contract letter	2.79	7	1.8	5	2.62	7	2.4	7
8	Improper project management either by the main contractor or the subcontractor	3.09	8	2.46	8	2.5	4	2.68	8

The results in Table 4.8, shows that the five most significant situations negatively influence the relation between the main contractors and their subs related with the contract agreements are: unclear payment terms, breaches of contracts, termination for convenience, ambiguities in contract documents and errors and omissions in the contract terms with a mean values of MV=1.69,1.78,1.99,2.19 and 2.32, respectively.

'Unclear payment terms' with a MV of 1.69 ranked the first cause of interface problems between main contractor and subcontractor. Unclear payment terms in a contract documents manly results conflict and misunderstanding. The results agree with Eriksson (2002) many disputes arise due to payment issues, thus it is significant to have a well-drafted payment clauses to state clearly on the process of payment by contractor. It also supported by Al-Hammad (1993) who emphasized that ambiguities of contract in payment terms can cause project encountered loss of profit. This may due to some of the contractors refuse to pay for

the completed work because they are not mentioned clearly the proper payments in the contract. Unclear payment terms can lead to dispute and claims.

The second situation that affect main contractor and sub-contractor relationship related to the contract document is 'breach of contract' with a mean value of (MV=1.78). Breach of contract may be done by the contractor or by the sub-contractors and it directly leads to conflict which affect the main contractor and subcontractor relationships. This result agrees with the results obtained by Henok (2018) that a party should perform his/her contractual obligations. If he/ she fails to discharge his/her obligation, the party is liable to breach of contract or to non-performance of the contractual obligation. This factor is a major one causing interface problems.

'Termination for convenience' is the third most contract document related situation that affect main contractor and subcontractor relationship. The above Table 4.8, shows that it have a mean value of (MV=1.99). This result is in line with McCord (2010) in that, termination for convenience is a contract provision that allows a main contractor to end up or terminate the signed contract of the subcontractor without any reason but just for the main contractor's need.

The fourth cause of contractual relationship problem between contractor and subcontractor is 'ambiguities in contract documents' with a mean value of (MV=2.19) as shown Table 4.8.According to Huang (2008) most awarded subcontracts do not have formal discussion between the contractor and the subcontractor. The problem normally happens when the involved parties make or execute the contracts. This idea also supported by (Bassam, 2007) an ambiguous contract can lead to conflict among parties. Ambiguity in contract documentation may be not specific clearly the activities, responsibilities and risks involved. It can cause errors and risk to the project that may lead to dispute.

The errors and omission in the contract documentation is the fifth causes of contractual relationship broblem between main contractor and subcontractor with a mean value of (MV=2.32). Loke Yisan (2013) emphasize that the errors and omission in the contract documentation is one of the causes of contractual claims and disputes. Errors can be considered as mistake in interpretations and calculation, and omissions. Eriksson P. E.(2002) also agree in this problem. Errors in contract documents are frequently caused by clients'

change of design and specifications, lack of adequate time to prepare contract documents, use of inexperienced designers to prepare contract documents, one party only involvement on the preparation of contract document.

4.3.4. The ways to enhance relationship problem due to contract document

In this section the results of the respondents' about ways to improve relationship problems due to contract document were discussed. Five major solutions were seated on the distributed questionnaire and results were selected and ranked using five points scale (Strongly agree, Agree, Neutral, Disagree and strongly disagree) and mean scores value (MV) . Table 4.9 Depict that the most five important ways that improve contractual relation between the main contractors and subcontractors.

Table 4.9: Ways that improve main contractor and sub-contractors contractual relationship.

No	Ways to enhance main contractor and sub-contractor relationship with respected to legal contract and document	Main Contractor		Domestic subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Contract should contain well-drafted payment clauses and terms.	1.25	1	1.13	2	1.87	3	1.42	1
2	Subcontracts should contain a detailed scope of work	1.7	5	1	1	1.75	1	1.48	2
3	Terms of contract has to be specified clearly.	1.34	2	1.36	3	1.75	1	1.48	2
4	Including a dispute resolution clause in any construction contracts.	1.5	3	1.5	4	2.12	5	1.71	4
5	Clear communication and negotiation between main contractor and subcontractor.	1.56	4	1.8	5	1.87	3	1.74	5

As indicated in table 4.9 'Contract should contain well-drafted payment clauses and terms' was ranked as the most important way with a MV of 1.42. This survey result is in line with the previous section 4.3.4.2, it was identified that unclear payment terms are ranked as first cause of contractual relationship problem between main contractor and subcontractors.

Francis Yik (2006) states that payment terms in a contract or subcontract are important means for ensuring the contractor or subcontractor will perform adequately, in terms of meeting the quality standard and timely completion of the works.

The second important ways identified in the survey result are 'detailed scope of works should include in the contract document' and 'terms of contract has to be specified clearly' with a mean value of 1.48. Francis Yik (2006) states that the contract document should detail the quantity and quality of work , performance required of the deliverables, objective methods and criteria for their measurement and verification, and the range of measurements to be recorded and submitted. This idea is also supported by Thomas (1995); if contract documents did not contain detailed scope of work, there will be change of plan or scope of the project which causes variation and misunderstanding in construction projects. However these survey result are not in line with the previous section 4.3.4.2, 'breaches of contract 'is secondly ranked situation that affect main contractor and subcontractor contractual relationship. Therefore the study suggests that avoiding breach of contract or agree on penalty for party who breach the contract is the way to eliminate this problem.

The above result is closely followed by 'including a dispute resolution clause in any construction contracts' with mean value of (MV=1.71). The last one was clear communication and negotiation between main contractor and subcontractor with a mean value of (MV=1.74). These survey results are not in line with the previous section 4.3.4.2, because 'ambiguities in contract document' and 'errors and omissions in the contract terms' are the last two situations that affect their contractual relationships so avoiding ambiguities and errors in contract documents are ways to improve the above problem. Respondents also suggest that main contractors and subcontractors should entered into an agreement in a legal way.

4.3.5 Main contractor and sub-contractor relationship with respect to payment practice

Main contractor- subcontractor interface problems also include delay in approving payments to the sub-contractors for finished work. The main contractors, domestic sub-contractors, consultants and clients were asked to attach weight between 1 and 5 to what each thought

were the main cause of relationship problem due to payment on a 20/80 condominium construction project. Due to their payment relationship is with the client nominated subcontractors were not included in this section.

According to the questionnaire results 22.7 % of the main contractor agrees that the payment to the sub-contractor should be executed when the work is in progress, 65.9% agree after completion and 11.4% wants to pay after final handover of the work. When we come to sub-contractors result; 50% of main contractors paid for sub-contractors before work is completed and 50% paid at the time of work completion.

In this study 79% of the respondents agree that disputes always occurred due to delay or absence of payment to the subcontractors, 14% responds it happens sometimes, and 7% said never happened. Tekle Hagos (2009) agree that there is always dispute between main contractor and subcontractor .This may due to under-payment, late or delayed payment and non-payment all together. Non-payment or under-payment refers to situations where an expected payment was never received, and/or would be considered bad debt, written off, or lost partially/fully. Late or delayed payment on the other hand, is a situation where payment is not made to head contractors or subcontractors on time, in accordance with the timelines agreed between the parties to the contract.

4.3.5.1 Situations that causes delay or absence of payment to the sub-contractors

Relationship problems between main contractor and subcontractor due to delay or absence of payment had many causes and those causes were ranked by their mean value (MV) as shown on the Table 4.10.

Table 4.10: Situations that causes delay of payment for the sub-contractors by the main contractors.

No	Situations that causes payment issuesbetween the sub-contractors and the main contractors	Main Contractor		Domestic subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Contractors' financial difficulties	2	2	1.26	2	2	1	1.63	1
2	Disagreement on the valuation of work done	1.9	1	1	1	2	1	1.75	2
3	Lack of trust	2.42	3	1.83	4	2.5	5	2.25	3
4	Pay when paid practice	2.56	6	1.9	5	2.4	4	2.29	4
5	Conflict among parties involved	2.43	4	2.1	6	2.5	5	2.34	5
6	Delay in certification	2.65	7	1.8	3	2.75	8	2.4	6
7	Employer's poor financial management	2.68	8	2.43	7	2.25	3	2.45	7
8	Lack of adequate supporting documentation and different specifications from original plan.	2.44	5	2.46	8	2.5	5	2.47	8
9	Payment rules clauses that allow the main contractor to delay the subcontractor payment	2.95	9	3.06	9	2.87	9	2.96	9

The result, which is presented in Table 4.10, show that 'Contractors' financial difficulties' with a mean value of (MV=1.63) is the first cause of delay or absence of payment to the subcontractor and highly affects main contractor subcontractor relationship. This result is in line with Thomas and Napolitan (1995) if a contractor experiences financial difficulties during the course of a project, it may result in lacking of resource availability and dispute with other project parties. Yisan (2013) also states that main contractor's financial problem leads to adversarial relationship between both parties. According to sub-contractors interview they had stopped work several times when the main contractor had refused to pay for the

works done. As adduced by Thomas and Napolitan (1995) financial problems which was rated as the most important interface problem could lead to payments delay to the sub-contractor. This situation puts the subcontractor under intense pressure in meeting its financial obligations and hence, friction develops between the two parties.

The second situations that causes delay or absence of payment for the sub-contractors by the main contractors identified in this study is 'disagreement on the valuation work done' with a mean value of (MV=1.75). Yisan (2013) states that when the scope of work executed and valuation of work done are not fully understand by general contractor and owners, it became a critical problem to the subcontractors and main contractors' relationship and success of projects. Payment delay also happens if the quantities of works certified to be complete are less than the claimed quantities.

'Trust' was rated by the respondents as the third position with a mean value of (MV= 2.25).Lack of trust leading to an adversarial working relationship among main contractors and subcontractors, since all actions are not implemented by agreement. Main contractors may not trust the subcontractor's work quality, material used and may not have trust on the valuation of work done, and consequently the main contractors refuse to pay in a timely manner. Hinze (1994) specified that the contractual relationship between the main contractors and their subcontractors could be affected by problems associated with lack of trust which causes misunderstanding on the work execute and the amount paid between main contractor and sub-contractor. According to Thomas (2011) trust is necessary in every working relationship management concept and it is a necessary requirement that needs to be built in every working relationship since not all aspects can be controlled by contract.

The fourth finding of this research about situations that causes delay of payment for the sub-contractors is 'Pay when paid practice' which have a mean value of (MV=2.29). 'Pay when paid practice' means main contractors didn't released payment to Subcontractors unless the client released payment to them or payment will be made to the sub-contractor only after he main contractor has received the payment from employer. This result is in line with Francis (2006) subcontract only requires and expect the main contractor to pay the subcontractor within few days after the main contractor has received payment from the Employer, i.e. the 'pay-when-paid' principle. As the main contractor was not paid any cash, he considered it is

not an obligation for him to pay the subcontractor. These often give rise to conflict and disputes between a main contractor and a subcontractor while the subcontractor can only rely on the dispute settlement mechanism provided in the subcontract to resolve the problem. Failing this, the subcontractor will need to go for litigation to regain from the main contactor the money due to him. Francis (2006) also justified that subcontractors are often paid late by general contractors because of 'pay-when-paid' and 'pay-if-paid' clauses included in most contract forms, which tend to increase total project cost;

The fifth cause of delay of payment by the main contractor is dispute among parties. As shown on Table 4.10 it has a mean value of 2.34. According to Othman (2012) relationship between contractors and subcontractors are often strained and expose to argument due to problem of fairness and misunderstanding of each other. As stated by Olawale (2010) a construction project involves so many problems between parties e.g. lack of cooperation, inefficient communication, lack of knowing and sharing of responsibilities and lack of proper documentation of work carried out by subcontractor may cause confusion on site leading to relationship problems between project stakeholders. Because of those reasons and misunderstandings main contractors refuse to pay for the subcontractors.

4.3.5.2 Ways to improve relationship problems due to payment practice

On the Table 4.11 as shown below; respondents were asked to rate ways to enhance working relationship problem due to payment practice. All the factors were ranked by the result of total weighted average of main contractor, domestic subcontractor, consultant and client according to their MV from highest to lowest in order to adduce the most crucial factors. The factor with a least mean square values is considered as the major way of improving the problem.

Table 4.11: Ways to improve payment issues between sub-contractors and main Contractor

No	Ways to improve payment issues between sub-contractors and main Contractor	Main Contractor		Domestic subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Payments should make according to the agreement.	1.63	1	1.06	1	1.87	1	1.52	1
2	Agree on fixed payment schedule	1.84	2	1.33	2	2.12	5	1.76	2
3	Developing trust between parties	1.88	3	2	5	1.87	1	1.92	3
4	Good communication with the contractor	2.02	5	2	5	2	3	2.01	4
5	Make late payment fees as a part of payment terms	1.95	4	1.7	3	2.75	7	2.13	5
6	Document the invoices and other supporting document	2.5	7	1.93	4	2	3	2.14	6
7	Negotiate with the client.	2.22	6	2.96	7	2.5	6	2.56	7

As shown in Table 4.11 'Make payments according to the agreement' was ranked first with a MV of 1.52.This means respondents saw this factor as very important to the interface due to payment issue between main contractors and subcontractors. If payments are executed according to the agreement conflicts and disputes are eliminated and delay of payments are reduced. These results agree with Francis (2006) who saw the payment terms in a contract or subcontract are important means for ensuring timely payment which is considered as a crucial factor to the main contractor-subcontractor relationship.

From Table 4.11it is shown that 'agree on fixed payment schedule' to subcontractor is also has an MV of 1.76 meaning it is also ranked in second position. The payment schedule of the

contractor or the time frame for payment was important for their cash flow. Even though the standard conditions of contract state that, the time frame for payment is hardly adhered to. These payment schedules would help the contractor for effective planning and avoidance of dispute arising between sub-contractor and main contractor.

'Developing trust between parties' with a MV of 1.92is ranked as the third way for improving relationship problems due to payment related issues between contractor and sub-contractor. According to Huang (2008) trust is an essential requirement that needs to be built in every relationship since not all aspects can be controlled by contract. Othman (2012) also states that the main contractor has to put trust on the subcontractor that will execute the work and subcontractors should take responsibility and put trust on the main contractor that will pay for his/her work.

According to Table 4.11, developing good communication with the contractor is ranked by respondents as fourth way to enhance payment issues between parties, which had a MV of 2.01 Good communication between main contractor and subcontractor is the best way to understand problems each other. Lagiman (2017) agree with this idea ,for a smooth flow of information exchange, an effective communication system is required as it can help to clear any misunderstanding or integrity of message conveyed, to receive proper response and feedback from the other party.

The fifth way to enhance main contractor and sub-contractor payment issue is make late payment fees as a part of payment terms in the contract document which have a MV of 2.13. This means if the main contractor did not released payment to the subcontractor in the fixed payment schedule for executed works, based on the contract term the main contractor will punished extra fee for late releasing of subcontractors' payment. This idea is in line with Francis (2006) a contract or subcontract should have included payment terms that define the conditions for payments and the handling procedures to be observed by the contract parties. These will typically include the timing for submission of interim payment claims, the substantiating information to be included in the claims, the methods and procedures for determining and certifying how much money is to be paid and when payments are to be made.

4.3.6 The impact of subcontractor on the contractor competiveness

This is the sixth section of the questionnaire survey which is about impact of subcontractor on the main contractor competitiveness in Addis Ababa 20/80 condominium projects. Impacts may be positive or negative; therefore this section had two subsections which are positive and negative impacts of subcontractors. The respondents were asked to rank the positive and negative impacts using five points scale (Strongly agree, Agree, Neutral, Disagree and strongly disagree) and the results were identified from the responds based on the mean value (MV) of the five groups of respondents; contractor, nominated subcontractor, selected subcontractor, client and consultant. Based on a Likert-scale ranging from 1 strongly agree to 5 strongly disagree. In this study the result which had minimum mean score are considered as the most common impact.

4.3.6.1 Positive impact of subcontractors on the main contractor competitiveness

Table 4.12: The positive impact of subcontractor on the contractor

No	The positive impact of subcontractor on the contractor competiveness	Main Contractor		Selected subcontractor		Nominated subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank	MV	Rank
1	Productivity increases	1.68	1	1.1	1	1.72	1	1.87	1	1.59	1
2	Improvement of flexibility	1.81	2	1.26	2	2.07	4	1.87	1	1.75	2
3	Elimination of sub-used labour and equipment maintenance	1.88	4	1.53	3	1.97	2	2.5	4	1.97	3
4	Reduction of delays	1.81	2	1.96	4	2.02	3	2.5	4	2.07	4

No	The positive impact of subcontractor on the contractor competiveness	Main Contractor		Selected subcontractor		Nominated subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank	MV	Rank
5	Easiness in costs control	1.93	5	2.03	5	2.22	5	2.5	4	2.17	5
6	Improves the product's quality	2.40	6	2.13	6	2.4	6	2.25	3	2.30	6

Table 4.12 shows the MV and rank of the main groups of positive impacts of subcontractor on the main contractor competitiveness. According to the results shown 'increasing productivity' is the main and the first positive impact of subcontracting with MV of 1.59. The main advantage of subcontractors is increasing of productivity of the main contractor and maximizing profit. Due to the reason subcontractors are experienced and able to execute specialized work tasks more efficiently, they are able to deliver larger productivity when compared with the company's own labor force.This result is closely followed by 'improvement of flexibility' with MV of 1.75.Improving flexibility means reducing the work pressure on the main contractors which allows the main contractor to participate in different projects.

The third advantage of subcontracting according to the survey results is 'Elimination of sub-used labour and equipment maintenance'with a MV of 1.97.This is because subcontractors are specialists who have their own labour and equipment so the main contractor is not obligatory to employ additional labour. Naseem (2005) agree that subcontractors helped main contractors to overcome problems related to skilled and specialized expertise, scarce in material and equipment resources and constraint in funds.

The fourth and fifth positive impact of subcontractor on the main contractor competitiveness is 'redaction of delay' and 'easiness in cost control' with a MV of 2.07 and 2.17 respectively. If subcontracting is perform properly with avoiding of the above problems mentioned in the

previous sections, it helps the main contractor to finished the project on the schedule and reduce the project cost.it also provides easiness of cost control of the project.

4.3.6.1 Negative impact of subcontractors on the main contractor Competitiveness

Table 4. 13: The negative impact of subcontractor on the contractor

No	The negative impact of subcontractor on the contractor competiveness	Main Contractor		Selected subcontractor		Nominated subcontractor		Client & Consultant		Weighted Average	
		MV	Rank	MV	Rank	MV	Rank	MV	Rank	MV	Rank
4	Disputes /conflict between different project parties	2.06	3	1.86	1	2.3	1	1.7	1	1.98	1
3	Poor project quality	2.00	2	2.73	4	2.52	3	2	2	2.31	2
2	Cost overrun	2.11	4	2.66	2	2.5	2	2.25	3	2.38	3
1	Time overrun in terms of delay	1.97	1	2.66	2	2.7	5	2.37	4	2.43	4
5	Suspension of the work or contract termination	2.36	5	2.8	5	2.65	4	2.87	5	2.67	5

As subcontracting have many advantages for the competitiveness of the main contractor it have also negative impacts. Table 4.13 shows that the negative impact of subcontractor on the contractor competiveness. According to this study the first adverse effect of subcontracting is dispute or conflict between different project parties especially between main contractor and subcontractor with a MV of 1.98. Their contractual relationship is always prone to conflict and disputes. This may happened due to many reasons as mentioned in the above sections some of the causes were misunderstanding of each other's need, communication problem, contractual problem, payment issue etc.

According to Table 4.13, the second negative side of subcontracting is poor project quality with a MV of 2.31. This problem mainly happened when the main contractor gave subcontract to excessive sub-contractors and when multi-layer subcontracting is highly practice. The other thing which results quality problem is the main contractor required from the subcontractor to submit low bid price and they want subcontractors' agreement in low price. This is mainly related with inaccurate and low cost estimation which affected the quality of the work as subcontractors have no enough attention to the quality of the work due to their interest to make profit and owning the work. Othman (2012) suggests that the subcontractors' main focus is on work completion with the least attention to material wastages and work quality. This could be because sub-contracted services are paid on the basis of physical production at a fixed price.

The third and fourth negative impacts of subcontractors on the main contractor competitiveness is cost and time overrun with a MV of 2.38 and 2.43 respectively as shown on Table 1.17. These problems may depend on the nature of relationship of the two parties. Olawale (2010) says that increased sub-contracting may reduce the main contractor's control over the construction process and could lead to cost and time overruns. 'Contract termination' is ranked as the fifth negative impact of subcontracting as shown on Table 4.13 with an Ms of 2.67.due to subcontractors related factors such as lack of quality work ,disputes with the main contractor , cost and time overrun main contractors may terminated by the employer and lose projects.

4.4 Interview data analysis and Discussion

In addition to questionnaire survey, face-to-face interview was considered a better approach to make possible in-depth discussions. Semi–structured interviews were carried out to support the questionnaire survey results and it targeted 12 professionals working for contractors, selected subcontractors, nominated subcontractors consultants and clients. The interviewees were sampled using purposive sampling in order to obtain data from selected parties that were seen as best to afford the needed information. Each interview was conducted individually and the selected individuals were above 10 years' experience in 20/80 condominium projects. The interview questions were designed in a way to answer the

research objectives and open ended questions were designed for the interview in ordered get open responses from the respondents without any restrictions.

4.4.1. Designation of Interviewee and Experience in 20/80 Condominium Projects

In this section of the interview general information of the respondents were asked. It consists of the category of the company in which the respondents were worked and the total years of experience of the respondents worked in 20/80 condominium .The interviewees were all at senior positions as shown below on Table 4.14, four main contractors with above 15 years of experience, three nominated subcontractors the two of them have 10-15 years of experience and one of them have above 15 years of experience and the last categories are domestic subcontractors which are five in number with above 15 years of experience.

Table 4.14: Interviewee general information

Interviewees	Years Working in 20/80 Condominium Projects					Total
	Below 3 Years	3-5 Years	5-10 Years	10-15 Years	above 15 Years	
Main contractor	0	0	0	0	4	4
Nominated subcontractor	0	0	0	2	1	3
Domestic subcontractors	0	0	0	0	5	5
Total	**0**	**0**	**0**	**2**	**10**	**12**

4.4.2. Current Practice and criteria for selection of subcontractor

The main objective of this section is to understand the main criteria and practices used for selection of subcontractors in 20/80 condominium projects. The interviewees' responses show that it is quite common that subcontractor which offer least price is choice of main contractors. All the interviewees agree that price is the first ranked selection criteria used by the main contractor in the project. The other major selection criteria that 95% of the interview ranked as second selection criteria is previous relationship experience with the main contractor and past performance experience. A subcontractor experienced in undertaking

projects of a similar type with the main contractor in previous times would seem to require less risk premium, because implementing similar previous projects enables the subcontractor to work smoothly, complete the works on time and helps to achieve the best quality. This is also in turn resulted in less cost, because subcontractor is likely to have greater confidence in knowing the nature of the project and in completing the project.

Subcontractor's past performance also a good indicator of its technical abilities and makes the subcontractor perforable. The interviewee also said that main contractors usually need subcontractor who delivered the work on time with the required quality. Almost all the interviewee agrees with this criterion.

4.4.3. Nature of contractual relationship of main contractor

In this section over all nature of main contractor and subcontractor contractual relationship related with coordination, working contract, payment practice and other issues gathered from the interviewee will discussed.

According to the interviewee there is always dispute and conflict between these two parties in this types of projects. The main reasons for the problem outlined by the respondents are self-interest and unwillingness of main contractor working together with the subcontractors especially with nominated subcontractors.90% of the interviewee agree in this idea. Many main contractors scheduled their work without consideration and communicating of the subcontractor. So when the time of execution of work the main contractor affects the subcontractors work and Vis versa. Subcontractors also want to execute their work before the preceding works done by main contractor are finished .For example main contractors cast concrete without notifying of the electrical or sanitary subcontractors, LTZ door and Window subcontractors fix doors and windows by drilling walls without the awareness of main contractor and so on.

The other thing is unwillingness of main contractor in suppling or delivering materials or equipment and unwillingness of sub-contractors in getting commands from the main contractor. In 20/80 condominium projects materials for nominated subcontractors are supplied by the client and distributed to the main contractors, main contractors take all the responsibility up to delivered to the sub-contractor. But many main contractors were refuse to

deliver it on time which leads to conflict between two parties. Commands gave by the main contractor also main problem for their relation. Sometimes commands may not come from only from the consultant and the client. As the main contractor is responsible for the whole building, commands may arise from them. But subcontractors want to get orders from only the consultant or the client because of its contractual relationship is only with them. These problems results on working relationship problem between them.

The other problem which affect their relationship is mentioned by the interviewee was late payment to the subcontractors, which directly affects domestic subcontractors. Most of the time main contractors are being slow to pay their subcontractors for finished work. Indeed, 92% of subcontractors verified that the payments received from main contractors were delayed by more than 1 up to 6 months after the completion of the work. While only 25% of main contractors agreed on that. According to the respondents, this delay and absence of payment results financial hardships for the sub-contractor, which in turn can affect the progress of the works profitability and subcontractor performance, leads to abandonment of projects, affects trust between the subcontractor and main contractor and generally creates negative impacts on main contractor and subcontractor contractual relationships and both parties become distrustful in all business dealings.

Concerning signed contract between main contractors and subcontractors, 85% of respondents indicated that subcontractors started works without signing of any written contract. Oral agreements were done between these two parties. This leads to conflict in the middle or after completing of work due to misunderstanding of quantity of work executed and breach of contract.

The other major factor for main contractor and subcontractor contractual relationship problem mentioned by the interviewee is frequent absence of parties from the site. According to the interviewee this problem mainly affects communication process of main contractor and subcontractors. The frequent absence of main contractors from site affects both nominated and domestic subcontractors.70% of respondents indicated that informal, face to face communication was the main thing for solving misunderstandings. The results of interview indicated that 65% of respondents communicate with main contractors by telephone. Only 7% of the respondents have declared that they have formal communication (using letters) or

written documents with the main contractors. This result reflects the informal relationship features between general contractors and subcontractors and results lack of trust between them. Main contractors on the other hand complain that subcontractors have a habit of absence and bringing inadequate workmen to site by giving the work to the other subcontractor (multi -layer subcontracting), a practice which hampers the works and fuel conflicts. All the contractors mentioned that in managing their multi job resource pressures from different construction sites, subcontractors unable to struggle to meet up work programmes on sites and quality required.

Even though there are many problems encountered between main contractor and sub-contractors, subcontracting is valuable for main contractors' competitiveness and success of project if it is implemented properly. 88% of interviewee agreed that subcontractors help main contractors overcome problems including the need for special expertise, resource shortage, and financial limitations.

At last all the sub-contractors suggest that main contractors are not truly interested in developing cooperative working relationships. For these reasons, subcontractors are mistrustful of main contractors and remain uncertain about the authenticity of calls to collaborate. So developing trust may reduce this problem. Also late payment is major issue in construction industry as supposed by many subcontractors. Therefore, almost all subcontractors and main contractors indicated that the current payment practice needs to be improved and agreements should be done in written form. On the other hand 45% of the main contractors' respondents were not happy with the current relationship with subcontractors. The majority of the interviewee of main contractor have agreed that there is lack of teamwork and less flow of information exchange between general contractors and subcontractors.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

This chapter is comprised of conclusions and recommendations that conform to the research objectives by considering the results, analysis and discussions. The research carried out has shown the problems associated with the contractual relationship between main contractor and sub-contractors related with coordination issue, legal contract, selection criteria, payment practice and sub-contractors impact on main contractors' competitiveness. . The recommendations drawn from the evaluation may help the main contractors and sub-contractors to improve their working relationship and to eliminate dispute and conflicts arise in construction industry in general. It also introduces recommendations for further researches concerning the nature of relationship of parties.

5.1 Conclusion

- 30-50% of the total work accomplished by using subcontracting practice (and even multitier subcontracting) in the in the Addis Ababa 20/80 condominiums .But the contractual relationship between main contractors and subcontractors is considerably poor.
- Effective subcontractor selection which can minimize the problem would determine the relationship of main contractor and subcontractor.
- Main contractors mostly considered 'tender price' as a predominant basis for selection of domestic subcontractors, however subcontractors who offer lowest price are low qualified as a result of shortage in resources and low capabilities.
- There is a coordination problem between main contractor and subcontractors in Addis Ababa 20/80 condominiums.
- The main causes of coordination issues found in this study are client delay in supplying materials to the subcontractor as well as main contractor which is the major cause and followed by scheduling conflicts among the subcontractors and main contractor, frequent absence of the main contractor from the site, lack of commination (poor level of information sharing), and multi-layer subcontracting.
- Most of main contractors and subcontractors entered in an agreement orally without any written document.

- The causes of contractual relationship problems related with contract document which is an attainment of this study are; unclear payment terms, breach of contract, termination for convenience ambiguities in contract documents and errors and omission in the contract documentation.
- There is contractual relationship problem related with payment practice between main contractor and subcontractors in Addis Ababa 20/80 condominiums. The main causes of this problem stated on the finding of this study are; contractors' financial difficulties, disagreement on the valuation work done, lack of trust, pay when paid practice and dispute among parties. These are the major causes of delay or absences of payment by the main contractor to the subcontractors.
- Delayed payment by client or main contractor most likely will cause excessive cash-flow problems for both the main contractors as well as for subcontractors, and this would have a devastating knock-on effect down the contractual payment chain.
- Failure to receive payment in a timely manner could expose main contractors and subcontractors to a greater risk of contractual relationship.
- The most serious effects of absence or delayed payment are; financial hardships for the sub-contractor, affect the progress of the works profitability and subcontractor performance, leads to abandonment of projects, caused distrustfulness between the subcontractor and main contractor and generally creates negative impacts on main contractor and subcontractor relationships.
- If subcontracting is practiced effectively and in legal way it has many advantages and positive impacts on the main contractors' competitiveness. According to the findings shown this study
- Increasing productivity' is the main positive impact of subcontracting. It also advantages for improving flexibility of main contractors, which means it is able to participate in many projects. The other rewards for main contractors from subcontracting are elimination of sub-used labour and equipment maintenance, redaction of delay and easiness in cost control'.
- Subcontracting has also negative impact for main contractors if it is not implementing properly. From those negative impacts of subcontracting are; dispute or conflict between different project parties ,poor project quality ,cost and time overrun and

contract termination are among the major drawbacks of subcontractors on the main contractor competitiveness.

5.2 Recommendation

The following points can be recommended to all parties in order to improve contractual relationship between main contractors and subcontractors and to increase main contractors' competitiveness.

Main Contractors are recommended to consider the following factors

- A well-designed selection criterion is necessary for selection of subcontractors by main contractors. There should be a good combination of subcontractor selection criteria, apart from price.
- The addition of harsh contract terms in subcontract agreements by main contractors and scheduling conflicts mainly results working relationship problems. Main contractors are advised to prepare a schedule and contract documents with the participation or knowing of subcontractors. Work program should be updated together with the subcontractors depending on the nature of the project.
- It is advised that contract documents between main contractor and subcontractor should include payment terms and dispute resolution clauses.
- Main contractors should have delivered materials and resource on time for both nominated and domestic subcontractors.
- Main contractors must realise that to make good communication with subcontractors, they should eliminate or reduce frequent absenting from site.
- Main contractor recommended managing his financial resources and releasing payment on the schedule to the subcontractors.

Sub Contractors are recommended to consider the following factors

- Sub-contractor members should work concerning their common goal of finishing project works as a team with main contractors.
- Subcontractors are recommended to offer appropriate and reasonable prices that safeguard acceptable profit margin acquired by them without affecting quality of the work.

- Subcontractors should start work by signing legal or written agreement document with the main contractor. And also they must be sure and understand about terms and clauses on the contract document.
- Subcontractors are advised to ensure that they employ enough number of qualified technical staff who have appropriate experience of the project.
- Subcontractors are recommended to be sure on their capacity and current work load before accepting new projects.
- Subcontractors should avoid giving the work to other subcontractors (multi-layer subcontracting).

Client and Consultants should give special attention to the following recommended factors:

- Consultants and owner are recommend releasing payment on the time schedule to the main contractor and nominated subcontractors.
- Multi-layer subcontracting makes quality acquiring more difficult because of profit absorption at the different levels. Efficient controlling operations are recommended to the consultant and client.
- Consultant should follow the progress of activities and the presence of main contractors as well as subcontractors on the project site.
- Client should prevent delay of materials and drawings delivery.
- Client and consultants should play great role in creating smooth communication and coordination between main contractor and subcontractors.
- Client and consultants should schedule fixed time for meeting with main contractors and subcontractors for evaluating the work progress and their relationship.

5.3 Suggestions for further study

- Due to time and accessibility restrictions, the study population was limited to Addis Ababa 20/80 condominiums only and also it is limited in terms of the sample size used. For future studies this sample size should be enlarged and cover other projects so as to give proper representation of the relationship between the contractors and their subcontractors.
- Study on developing a system for registration and categorization of subcontractors.

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APPENDIXES

Appendix A: Questionnaire (English)

Addis Ababa institute of Technology

School of Civil and Environmental Engineering

Questionnaire for

Study on Contractual Relationship between Main Contractors and Subcontractors and Their Impacts on Main Contractors' Competitiveness in 20/80 Condominiums

Dear respondent, this questionnaire is prepared to obtain necessary data for the partial fulfilment of an MSc thesis in Construction Technology and Management at Addis Ababa University. The objective of this thesis is to

I. Identify and rank the most common factors used by general contractors in the selection of suitable subcontractors in 20/80 condominiums.
II. Highlight the common factor that cause coordination issues between the contractors and subcontractor in 20/80 condominiums.
III. Investigate the contractor-subcontractor relationship with respect to legal contracts and payment practice in 20/80 condominiums.
IV. Investigate the impact of subcontractor on the contractor competiveness in 20/80 condominiums.
V. Propose recommendations to improve the contractor-subcontractor relationship in 20/80 condominiums.

I appreciate your effort in answering the questions in the questionnaire, knowing that the given information will be used for the purpose of academic purpose only and will be treated Confidential. If you have any inquiry please contact through the following addresses.

I am grateful in advance for your cooperation

Yemsirach Sintayhu

December 2019

For any questions, please call Mobile No.:251973089205, Email: misr.sintayehu@yahoo.com

Section 1: General Background Information

This section of the questionnaire refers to background or biographical information. The questions below are related to your organization and yourself. Please tick the box corresponding to your answer (please tick one) and also fill the blank spaces provided.

1.1. Name of organization: (Optional) _____

1.2. Type of organization:

Contractor ☐ Subcontractor ☐ Client ☐

Consultant ☐ Other ☐ (P lease specify):_____

1.3 Please specify your position on this site _____

1.4 What is your highest level of education?

Graduate (MSC) ☐ Under Graduate (BSC) ☐ Diploma ☐

If other, please specify _____

1.5 How long have you been working in construction projects?

Below 3Years ☐ 3-5 Years ☐ 5-10 Years ☐

10-15 Years ☐ above 15 Years ☐

1.6 Total years of experience in the condominium construction projects

Below 3Years ☐ 3-5 Years ☐ 5-10 Years ☐

10-15 Years ☐ above 15 Years ☐

Section 2: On the table below there are numbers of factors identified from literature review, which is used by main contractors for selection of suitable sub-contractors in 20/80 condominiums.

(Tick **(X or √)** in the blank space provided)

Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

Note: *Nominated subcontractor is a subcontractor appointed and paid by the client. And domestic subcontractors are subcontractor appointed and paid by the main contractor.*

No	Factors used by general contractors for selection of suitable Subcontractors	1	2	3	4	5
2.1	Past Experience/ Positive attitude/					
2.2	Acceptability to the client					
2.3	Reputation of the company/Subcontractor/					
2.4	Competitiveness of the subcontractor's tender price and item rates					
2.5	Quality of production					
2.6	Ability to manage resources					
2.7	Efficiency					
2.8	Enthusiasm for the project					
2.9	Employment of qualified members					
2.10	Human resource management					
2.11	Completion of the work on time					
2.12	Innovation potential, development, opportunities for future work					
2.13	Construction method					
2.14	Collaboration with other subcontractors					
2.15	Suitability of financial capability					
2.16	Completion of job within the budget					
2.17	Technical Knowledge					
2.18	Cooperation					
2.19	Good relationship with the Main Contractor and trust					
2.20	Sub-Contractor relation with construction technology and construction techniques					

2.21	Ability to provide the necessary equipment					
2.22	Adherence of the subcontractor to subcontract requirements					
2.23	Satisfying customer criteria,					
2.24	Not partnering the works to another subcontractor					
2.25	Services after work completion					
2.26	Occupational health and safety					
2.27	Current workload					
2.28	Ability to handle the type, quality, size of Work					

Others, please identify _____

Section 3: Common factors that causes coordination issues between the main contractors and subcontractor in AAHDC

(Tick **(X or √)** in the blank space provided)

Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

3.1 Common factors that causes coordination issues

No	Common factors that causes coordination issues between the contractors and subcontractor in in 20/80 condominiums	1	2	3	4	5
3.1.1	Lack of communication					
3.1.2	Lack of regular meetings to review progress					
3.1.3	Self-interests					
3.1.4	Multi-layer subcontracting					
3.1.5	Access to technical and managerial knowledge					
3.1.6	Lack of Collaboration/team work/					
3.1.7	Lack of Trust					
3.1.8	Delay by the main contractor in providing the necessary material					
3.1.9	Failure to provide proper security for the site and plant					
3.1.10	Frequent absence of the main contractor from the site					

3.1.11	Involvement of the main contractor in several projects at the same time					
3.1.12	Involvement of the sub-contractor in several projects at the same time					
3.1.13	Interaction of the work of subcontractors, which lead to delay					
3.1.14	Scheduling conflicts among the subcontractors					
3.1.15	Low experience and low capability of the main contractor					
3.1.16	Neglecting the instructions of the main contractor					
3.1.17	Shortage of skilled labour with the sub-contractor					
3.1.18	Giving instructions by the client to the subcontractor directly without notifying the main contractor					
3.1.19	Client delay in releasing payments to the main contractor & sub-contractor					
3.1.20	Client delay in providing requirements drawings and supplying materials					

3.2 The ways to improve coordination issue between main contractors and sub-contractors?

No	**The ways to improve coordination issue between the main contractors and subcontractor in in 20/80 condominiums**	**1**	**2**	**3**	**4**	**5**
3.2.1	Balanced flow of information and regular meetings between main contractors and subcontractors.					
3.2.2	Main contractors shall select experienced subcontractors.					
3.2.3	There shall be legal contracts, regulations and dispute resolution clauses before works are started.					
3.2.4	The main contractor should provide the necessary requirements, payments, drawings					

	and materials early for the sub-contractor.					
3.2.5	Client or consultant should control over all relationship of main contractors and subcontractors.					
3.2.6	Avoiding interference of the client between main contractor & subcontractor.					
3.2.7	The main contractor should always available on site and coordinate the works of subcontractors.					
3.2.8	The parties (contractor and subcontractor) should consider their financial conditions and plan carefully.					
3.2.9	The main contractor should take all the risk of the project and the subcontractor workers.					

Others, please identify _____

_____

Section 4: Nature of main contractor and sub-contractor relationship with respect to legal contract in 20/80 condominiums.

4.1 Nature of contract document b/n main contractor and subcontractor.

1. Who is stated as the employer for the contract you have entered into?

Main contractor ☐ Subcontractor ☐ Client ☐ Consultant ☐

2. What type of contract governing the contractual relationship between the main contractor and the sub contract?

Oral agreement ☐ written Contract ☐ Legal Contracts ☐ Other (Specify…….)

2. Who decides the type of contract?

Main Contractor ☐ Subcontractor ☐ Client ☐ Consultant ☐

4. Who belongs to prepare the Contract document between the main contractor and subcontractor?

Main contractor ☐ Subcontractor ☐ Client ☐ Consultant ☐

5. Is there any specification or contract condition used in the contract document?

Always ☐ Sometimes ☐ Never ☐ Don't know ☐

6. If there is certain specification, is the contract condition and specifications generally fair and clear?

Always ☐ Sometimes ☐ Never ☐ Don't know ☐

7. If parties doesn't fulfil, is there a penalty condition in the contract?

Always ☐ Sometimes ☐ Never ☐ Don't know ☐

8. Is there clause that specify the payment terms in the contract document?

Always ☐ Sometimes ☐ Never ☐ Don't know ☐

9. Is there sub-contractor termination clause in the contract document?

Always ☐ Sometimes ☐ Never ☐ Don't know ☐

10. Is there a disputes between head contractors and subcontractors can arise due to contract document?

Always ☐ Sometimes ☐ Never ☐ Don't know ☐

12. Is there a dispute resolution clause in the contract document?

Always ☐ Sometim ☐ Never ☐ Don't know ☐

4.2 What are the situations that affect main contractor and sub-contractor relationship with respected to the contract document? (Tick (X or √) in the blank space provided)

Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

No	situations that affect main contractor and sub-contractor relationship with respected to the contract document in in 20/80 condominiums	1	2	3	4	5
4.2.1	Breaches of contract					
4.2.2	Ambiguities in contract documents					
4.2.3	Errors and omissions in the contract terms					
4.2.4	Unclear payment terms					
4.2.5	Termination for convenience					
4.2.6	Improper project management either by the main contractor or the subcontractor					
4.2.7	Incomplete contract letter					
4.2.8	Non-adherence to the conditions of the contract					

Others, please identify _____

4.3 The ways to improve main contractor and sub-contractor relationship with respected to legal contract and document? (Tick (X or √) in the blank space provided)

Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

No	Situations to improve main contractor and sub-contractor relationship with respected to legal contract and document in 20/80 condominiums	1	2	3	4	5
4.3.1	Subcontracts should contain a detailed scope of work.					
4.3.2	Terms of contract has to be specified clearly.					
4..3.3	Clear communication and negotiation between main contractor and subcontractor.					
4.3.4	Including a dispute resolution clause in any construction contracts.					
4.3.5	Contract should contain well-drafted payment clauses and terms.					

Others, please identify _____

_____

Section 5: Nature of Contractor and sub-contractor relationship with respect to payment practice in 20/80 condominiums

1. The main contractor specifies that the final payment to the sub-contractor shall be

   The work in progress ☐ Completing the works ☐ Final Handover ☐

   Others (specify……..)

2. Is there a disputes and claim between main contractors and subcontractors can arise due to late realising of payment for the subcontractor?

   Always ☐ Sometimes ☐ Never ☐ Don't know ☐

3. Situations that causes delay of payment for the sub-contractors by the main contractors. (Tick **(X or √)** in the blank space provided)

   Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

No	Situations that causes payment issues between the sub-contractors by the main contractors in in 20/80 condominiums	1	2	3	4	5
5.3.1	Contractors' financial difficulties					
5.3.2	Lack of trust					
5.3.3	Pay when paid in terms of contracting					
5.3.4	Employer's poor financial management					
5.3.5	Disagreement on the valuation of work done					
5.3.6	Lack of adequate supporting documentation and different specifications from original plan.					
5.3.7	payment rules clauses that allow the main contractor to delay the subcontractor payment					
5.3.8	Conflict among parties involved					
5.3.9	Delay in certification					

Others, please identify _____

4. What are the ways to improve relationship problems due to payment practice? (Tick **(X or √)** in the blank space provided)

   Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = strongly disagree

No	Ways to improve payment issues for the sub-contractors by the main contractors in in 20/80 condominiums	1	2	3	4	5
5.4.1	Payments should make according to the agreement.					
5.4.2	Make late payment fees as a part of payment terms					
5.4.3	Developing trust between parties					

5.4.4	Good communication with the contractor					
5.4.5	Document the invoices and other supporting document					
5.4.6	Agree on fixed payment schedule					
5.4.7	Negotiate with the client.					

Others, please identify _____

Section 6: The impact of subcontractor on the contractor competiveness in in 20/80 condominiums

6.1 Positive impact of subcontractors on the main contractor competiveness.

(Tick **(X or √)** in the blank space provided)

Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

No	**The positive impact of subcontractor on the contractor competiveness**	**1**	**2**	**3**	**4**	**5**
6.1.1	Productivity increases					
6.1.2	Improvement of flexibility					
6.1.3	Improves the product's quality					
6.1.4	Easiness in costs control					
6.1.5	Reduction of delays					
6.1.6	Elimination of sub-used labour and equipment maintenance					

Others, please identify _____

_____

6.2 Negative impacts on contractor competitiveness that arises from poor interfaces between contractor and subcontractor.

(Tick **(X or √)** in the blank space provided)

Each scale represents the following rating: (1) = Strongly Agree, (2) = Agree, (3) = Neutral, (4) = Disagree, (5) = Strongly Disagree

No	Negative impacts on contractor competitiveness that arise from poor interfaces between contractor and subcontractor	1	2	3	4	5
6.2.1	Time overrun in terms of delay					
6.2.2	Cost overrun					
6.2.3	Poor project quality					
6.2.4	Disputes /conflict between different project parties					
6.2.5	Suspension of the work or contract termination					

Others, please identify _____

_____

Thank You

Appendix B: Questionnaire (Amharic)

አዲስአበባ ዩኒቨርስ ቴክኖሎጂ ኢንስቲቲዉት
የሲቪል እና ኢንቫይሮመንታል ኢንጂነሪንግ ትምህርት ክፍል
የመመረቂያ ጽሁፍ መጠይቅ

በዋና ተቋራጭና በንዑስ ተቋራጭ እና ማህበራት መካከል ያለ ግንኙነት እና በዋና ተቋራጩ ተወዳዳሪነት ላይ የሚያሰከትለዉ ተጽኖ (በአዲሰ አበባ ቤቶች ልማት ኮርፖሬሽን 20/80 ፕሮጀክቶች)

ይህ መጠይቅ የተዘጋጀበት ዋና ዓላማ በአዲስ አበባ ዩኒቨርስ ቴክኖሎጂ ኢንስቲቲዉት ለማሰወተርስ ዲግሪ መመረቂያ ፅሁፍ ዝግጅት የሚያገለግሉ የምርምር መረጃዎችን ለማሰባሰብ የተዘጋጅ መጠይቅ ነዉ.
የዚህ መመረቂያ ፅኑፍ ዋና ዓላማ

I. በአዲስ አበባ ቤቶች ልማት ኮርፖሬሽን 20/80 ፕሮጀክቶች ተጨባች ሁኔታ ዋና ሥራ ተቋራጮች ንዑስ ተቋራጭን ለመምረጥ የሚጠቀሙባቸዉ መመዘኛዎችን ለመለየትና ደረጃ ለመሰጠት ነዉ።
II. በአዲስ አበባ ቤቶች ልማት ኮርፖሬሽን 20/80 ፕሮጀክቶች ተጨባች ሁኔታ በዋና ሥራ በተቋራጮች እና በንዑስ ተቋራጮች መካከል ተባበሮ(ተናቦ) የመስራት ችግር ሚያመጡ ተግባራትን እና ችግሮችን ወይም ምክንያቶችን አጉለቶ ማሳት።
III. በአዲስ አበባ ቤቶች ልማት ኮርፖሬሽን ፕሮጀክት ተጨባች ሁኔታ በዋና በተቋራጮች አና በንዑስ ተቋራጮች መካከል ስለሚገቡት ህጋዊ የዉል ስመምነት እና የክፍያ አፈፃፀም መመርመርና መለየት።
IV. በአዲስ አበባ ቤቶች ልማት ኮርፖሬሽን ተጨባች ሁኔታ ንዑስ ተቋራጮች በዋና ተቋራጮች ተወዳዳሪነት ላይ የሚያደርሱትን ተጽኖ መለየት።
V. በአዲስ አበባ ቤቶች ልማት ኮርፖሬሽን ተጨባች ሁኔታ በዋና ተቋራጮች አና ንዑስ ተቋራጮች መካከል ሊኖር ሚገባዉን ስራ ግንኙነት ለማሻሻል የመፍትሄ አማራጮችን ማመንጨት ናቸዉ።

በዚህ መጠይቅ የሚሰበሰቡ መረጃዎች ለትምህርት ተግባራት የሚዉልና ለምንም ሌላ ተግባር የማይዉል መሆኑን እየገለጽኩ መጠይቁን በጥንቃቄ ለመሙላት ለሚያደርጉት ጥረትና ደግፍ በቅድሚያ ምስጋናየን አቀርባለሁ።

የምስራች ስንታየሁ
ታህሳስ 2012 ዓ.ም
ማነኛዉም ጥያቄ ካለዎት በስልክ ቁጥር ፡- 251973089205

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ክፍል 1፡ አጠቃላይ የመነሻ ሃሳቦች

በዚህ ክፍል መጠይቅ ውስጥ የተካተቱት አጠቃላይ መጠይቁን በመመላትና መረጃ በመስጠት የሚሳተፉ ሰዎችን የራሳቸዉ መረጃ የሚመለከት ሲሆን በእያንዳንዱ ጥያቄ ትዩዩ ምልክት በማድረግ እና ክፍት ቦታዎችን በመመላት መልስ እንዲሰጡ እጠይቃሁ።

1.1. የሚሰሩበት መስሪያ ቤት ስም _____

1.2. የሚሰሩበት መስሪያ ቤት ከየትኛዉ ዘርፍ ይመደባል

ከዋና ስራ ተቋራጭ ☐ ከንዑስ ስራ ተቋራጭ(ማህበራት)) ☐ ከባለቤት መስሪ ☐ ቤት

ከአማካሪ መስሪያ ቤት ☐ ሌላ ካለ ይጠቀሱ_____

1.3. የእርስዎ የስራ ሃላፊነት ? _____

1.4. የእርስዎ የትምህርት ደረጃ?

የመጀመሪያ ዲግሪ ☐ ሁለተኛ ዲግሪ ☐ ዲፕሎማ ☐

ሌላ ካለ ይጠቀሱ_____

1.5. በግንባታ ስራዎች ለምን ያህ ጊዜ ሰርተዋል?

ከ 3 ዓመት በታች ☐ ከ 3-5 ዓመት ☐ ከ 5-10 ዓመት ☐

ከ 10-15 ዓመት ☐ ከ 15 ዓመት በላይ ☐

1.6 በ አዲስ አበባ ቤቶች ልማት ኮርፖሬሽን በጋራ መኖሪያ ቤቶች ግንባታ ላይ ለምን ያህ ጊዜ ሰርተዋል?

ከ 3ዓመት በታች ከ 3-5 ዓመት ☐ ከ 5-10 ዓመት ☐

ከ 10-15 ዓመት ☐ ከ15 ዓመት በላይ ☐

ክፍል 2. የተለያዩ ጥናታዊ ጽሁፎችን በማቀናጀት ዋና ተቆራጮች ንዑስ ተቆራጮችን ለመምረጥ ወይም ለመለየት የሚጠቀባአቸዉ መመዘኛዎች በሰኝጠረዡ ዉስጥ ቀርበዋል።

እርስዎም መመዘኛ ይሆናል የሚሉትን (X ወይም √) ምልክት ያደርጉ።

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣ (1) = በጣም እስማማለሁ፣ (2) = እስማማለሁ ፣ (3) = ገለልተኛ ነኝ ፣ (4) = አልስማማም ፣ (5) = በጣም አልስማማም

ማስታወሻ፡-በተቋራጩ የሚሰየሙ(የሚመረጡ) ንዑስ ተቋራጮች ማለት የቅጥር፣የዉል፣በሚሰሩት ስራ እና በክፍያ ቀጥታ ግንኙት ያላቸዉ ከዋና ሥራ ተቋራጩ_ጋር ብቻ ሲሆን በባለቤቱ የሚሰየሙ (የተመረጠ) ንዑስ ተቋራጮች ማለት ደግሞ የቅጥር፣የዉል እና በክፍያ ጉዳይ ቀጥታ ግንኙነት ያላቸዉ ከባለቤቱ አሰሪዉ መስሪያ ቤት ጋር ነዉ።

ተ.ቁ	ዋና ተቆራጮች ንዑስ ተቆራጮች ለመምረጥ ወይም ለመለየት የሚጠቀማቸዉ መመዘኛዎች	1	2	3	4	5
2.1	የአለፉትን ዓመታት የስራ ልምዶችንና መልካም ስነምግባር					
2.2	በባለቤቶች ዘንድ ያለዉ ተቀባይነት					
2.3	የድርጅቱን ስምና ዝና ከግምት በማስገባት					
2.4	የንኡስ ተ፟ራጮችን ተወዳዳሪነት አቅም፣ የጨረታ ዋጋ					
2.5	የስራ ጥራት					
2.6	ስራዉን የመምራትና የማስተዳደር አቅም					
2.7	ቅልጥፋናና ብቃት/ዉጤታማነት					
2.8	ለፕሮጅቱን ያለዉ ጉጉት፣ ስሜትና ትጋት					
2.9	ብቁ የሰዉ ሃይል ቅጥር መኖሩ					
2.10	የሰዉ ሃይል አሰተዳደር አቅም					
2.11	በወቅቱ የመፈፀም ልምድና አቅም					
2.12	በቀጣይ ለሚሰሩ ስራዎች ለመሰራት ያለ የፈጠራ ስራ ፣ የማልማት አቅምና ያሉት መልካም አጋጣሚዎች					
2.13	የግንባታ የአሰራር ዘደዎች					
2.14	ከሌሎች ንኡስ ተቋራጮች ጋር ያለዉ					

	ተባባሪነት/ ተባብሮ የመስራት ችሎታና ልምድ					
2.15	ያለዉ የገንዘብ አቅምና የማስተዳደር ችሎታ					
2.16	ሥራዎችን በተያዘላቸዉ በጀት የመፈፀም አቅም					
2.17	ለስራዉ ያለዉ ሙያዊ እዉቀት					
2.18	ተባባሪነት					
2.19	ከዋና ተቋራጮች ዘንድ ያለዉ መልካም ግንኙነትና ታማኝነት					
2.20	በንዑስ ተቋራጭ ደረጃ የተሻሻሉ የግንባታ ቴክኖሎጂን እና ሙያ የመጠቀም ልምድ					
2.21	አስፈላጊ የስራ መሳሪያዎችን የማቅረብ አቅምና ችሎታ					
2.22	በንዑስ ተቋራጮች መካከል ያላቸዉ መረዳዳትና መደጋፍ					
2.23	የደንበኞችን ፍላጎት የማርካት ልምድና ችሎታ					
2.24	የተሰጠዉን ስራ ለሌላ ንኡስ ተቋራጭ አሳልፎ አለመስጠት					
2.25	ስራዉ ከተጠናቀቀ በኃላ ድጋፍ/አገልግሎት መስጠት					
2.26	ስራ ላይ ዋስትናና ደህንነት ሁኔታ					
2.27	የወቅታዊ የስራ ጫና					
2.28	የስራ ዓይነት፣ጥራትና መጠን የመጠበቅ ችሎታ					

ሌሎች ካሉ ይጥቀሱ ፡- _____

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ክፍል 3፣ በዋና ሥራ በተቋራጮች እና በንዑስ ተቋራጮች መካከል ተባበሮ(ተናቦ) የመስራት ሁኔታ

3.1 ተባበሮ (ተናቦ) የመስራት ችግር ሚያመጡ ተግባራትን እና ችግሮች በሰንጠረዡ ተዘርዝረዋል (በተሰጠዉ ክፍት ቦታ (X ወይም √) ምልክት ያድርጉ)

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣ (1) = በጣም እስማማለሁ፣ (2) = እስማማለሁ ፣ (3) = ገለልተኛ ነኝ ፣ (4) = አልስማማም ፣ (5) = በጣም አልስማማም

ተ.ቁ	በዋና ሥራ በተቋራጮች እና በንዑስ ተቋራጮች መካከል ተባበሮ(ተናቦ) የመስራት ችግር ሚያመጡ ችግሮች ወይም ምክንያቶች	1	2	3	4	5
3.1.1	መረጃ የመለዋወጥ ችግር / የመገናኛ እጥረት/					
3.1.2	ስራዎችን ለመገምገም መደበኛ ስብሰባ አለማድረግ/አለመኖር					
3.1.3	የግል ፍላጎት					
3.1.4	በርካታ ንዑስ ተቋራጭ መኖርየተሰጠዉን ስራ ለሌላ ንኡስ ተቋራጭ አሳልፎ አለመስጠት					
3.1.5	የሙያዊና የአመራር እዉቀት አለመኖር					
3.1.6	በትብብርና በጋር ያለመስራት ሁኔታ					
3.1.7	እምነት የማጣት					
3.1.8	በዋና ተቋራጭ ዘንድ አስፈላጊ ቁሳቁስ በማቅረብ በኩል መዘግየት					
3.1.9	በግንባታ ቦታዎች ላይ ተገቢዉን ደህንነት አለማስከበር /አለመጠበቅ/					
3.1.10	ዋና ተቋራጮች በግንባታ ቦታ ላይ ለተከታታይ ጊዜ አለመገኘት					
3.1.11	ዋና ተቋራጮች በአንድ ጊዜ በርካታ ፕሮጀክቶች ላይ መሳተፍ /መያዝ/					
3.1.12	ንዑስ ተቋራጮች በአንድ ጊዜ በርካታ ፕሮጀክቶች መሳተፍ/ መያዝ /					
3.1.13	ንዑስ ተቋራጮች እርስ በርስ መወዳደርና አንዱ በአንዱ ላይ ተፅኖ ማሳደር					
3.1.14	በንዑስ ተቋራጮች መካከል የስራ በመርሃግብሩ/ፕሮግራም/ ላይ አለመስማማት					
3.1.15	የዋና ተቋራጩ ልምድና አቅም ዝቅተኛ መሆን					
3.1.16	የዋና ተቋራጩን ትዕዛዝና ሃሳብ አለመቀበል					
3.1.17	የንዑስ ተቋራጩ ሰራተኞች ክህሎት ማነስ					

3.1.18	ባለቤቱ ዋና ተቋራጩን ሳያማክሩ በቀጥታ ለንዑስ ተቋራጮች ትእዛዝ መስጠት					
3.1.19	ባለቤቱ ለዋና ተቋራጭና ለንዑስ ተቋራጭ የክፍያ ማዘግየት					
3.1.20	ባለቤቱ ለንዑስ ተቋራጭ የቁሳቁስ አቅርቦትን ማዘግየት					

ሌሎች ካሉ ይጥቀሱ ፡- _____

<u>ክፍል 3.2</u> ፡- በእርስዎ አስተያየት በዋና ተቋራጭና በንዑስ ተቋራጮች መካከል ተባብሮ እና ተናቦ ለመስራት እና ችግሮችን ለማሻሻል ምን ምን ስራዎች መሰራት አለባቸዉ ይላሉ? (ከተጠቀሱት ዉስጥ ከሶስት በላይ ምልክት አያድረጉ)

ተ.ቁ	በዋና ሥራ በተቋራጮች እና በንዑስ ተቋራጮች መካከል ተባበሮ(ተናቦ) የመስራት ችግር ሚያመጡ ችግሮች ወይም ምክንያቶች	1	2	3	4	5
3.2.1	በዋና ተቋራጩ እና በንዑስ ተቋራጩ መካከል የተመጣጠነ የመረጃ ልዉዉጥ እና ቋሚ ስብሰባዎች ቢኖር፣					
3.2.2	ዋና ተቋራጩ ልምድ ካለዉ ንዑስ ተቋራጭ ጋር መስራት አለበት፣					
3.2.3	ማንገኛዉም ስራ ከመጀመሩ በፊት በሁለቱ አካላት መካከል ህጋዊ ዉል፣መቆጣጠሪያ ደንቦች እና ግጭት መፍቻ አንቀጾች መኖር አለባቸዉ፣					
3.2.4	ዋና ተቋራጩ አሰፈላጊ ነገሮች፣ክፍያዎችን እና ቁሳቁሶችን አሰቀድሞ ማቅረብ አለበት ፣					
3.2.5	ባለቤቱ ወይም አማካሪ መሰሪያቤቱ ሁሉንም የዋና ተቋራጩን እና የንዑስ ተቋራጩን ግንኙነቶችን መቆጣጠር አለበት					
3.2.6	በዋና ተቋራጭና በንኡስ ተቋራጭ መካከል የባለቤቱን ጣልቃ ገብነት ማስገድ ፣					
3.2.7	ዋና ተቋራጩ የንዑስ ተቋራጩን ስራዎች ማስተባበር/ማሰተካከል አለበት፣					
3.2.8	ዋና ተቋራጩ እና ንዑስ ተቋራጩ የገንዘብ አቅማቸዉን ያገናዘበ ዕቅድ ማዉጣት አለባቸዉ፡፡					
3.2.9	ዋና ተቋራጩ የፕሮጀክቱን እና የንዑስ ተቋራጩን ሰራተኞች በሚመለከት ሁሉንም ሀላፊነት መዉሰድ አለበት ፣					

ሌላ ካለ ይግለፁ _____፣

ክፍል4- በእርስዎ አስተያየት በተቋራጭና በንኡስ ተቋራጭ መካከል ከሚገቧቸዉ ዉሎች አንጻር ያላቸዉ ግንኙነት ምን ይመስላል/ በዋና ተቋራጩ ለተመረጠ ንዑስ ተቋራጭን ይመለከታል/፡፡

4.1 ዋና ተቋራጭ እና ንኡስ ተቋራጭ የሚገቧቸዉ ዉሎች ሁኔታ

1. እርስዎ ለገቡት የስራ ዉል ቀጣሪ መስራቤትዎ ማነዉ ?

ዋና ተቋራጩ ☐ ንዑስ ተቋራጩ ☐ ባለቤቱ መስሪያ ቤት ☐ አማካሪዉ ☐

2. በዋና ተቋራጭና በንዑስ ተቋራጭ መካከል ያለዉ የስራ ዉል ስምምነት የተፈጸመዉ

የቃል ስምምነት ☐ የፅሁፍ ዉል ስምምነት ☐ ህጋዊ እዉቅና ያለዉ ዉል ☐

ሌላ መንገድ ካል ይግለጹ _____

3. የገቡትን የዉል ስምምነቱ ዓይነት የወሰነዉ ማነዉ?

ዋና ተቋራጩ ☐ ንዑስ ተቋራጩ ☐ ባለቤቱ መስሪያ ቤት ☐ አማካሪዉ☐

4. በዋና ተቋራጭና በንዑስ ተቋራጭ መካከል የዉል ስምምነቱን የሚያዘጋጀዉ ማነዉ

ዋና ተቋራጩ ☐ ንዑስ ተቋራጩ ☐ ባለቤቱ መስሪያ ቤት ☐ አማካሪዉ ☐

5. የኮትራት ዉል ሰነዱ የተዘጋጀዉ በሌሎች ህጋዊ የዉል ሰነዶች ደጋፊነት ነዉ?

ሁልጊዜ ☐ አልፎ አልፎ ☐ አይደለም ☐ አይታወቅም ☐

6. የኮትራት ዉል ሰነዱ የሚዘጋጀዉ በሌሎች ህጋዊ የዉል ሰነዶች ደጋፊነት ከሆነ ሰነዶቹ ትክክለኛ (ሚዛናዊ) እና ግልጽ ናቸዉ ?

ሁልጊዜ ☐ አልፎ አልፎ ☐ አይደለም ☐ አይታወቅም ☐

7. በሁለቱ ተዋዋዮች መካከል የዉሉ ማፍረስ/ማጉደል ቢኖር ቅጣትን የሚገልጽ አንቀጽ አለዉ

ሁልጊዜ ☐ አልፎ አልፎ ☐ የለም ☐ አይታወቅም ☐

8. በዉል ሰነዱ ላይ የክፍያን ሁኔታ የሚገልጹ አንቀጾች አሉት?

ሁልጊዜ ☐ አልፎ አልፎ ☐ የለም ☐ አይታወቅም ☐

9.በዉል ሰነዱ ላይ ከንዑስ ተቋራጩ ጋር ያለን ዉል ማቋረጫ የሚገልጹ አንቀጾች አሉት?

ሁል ጊዜ ☐ አልፎ አልፎ ☐ የለም ☐ አይታወቅም ☐

10. በዋና ኮትራክተሩና በንኡስ ተቋራጩ መካከል በኮትራክት ዉል ሰነዱ ምክንያት አለመግባባት ተፈጥሮ ያዉቃል?

ሁልጊዜ ☐ አልፎ አልፎ ☐ የለም ☐ አይታወቅም ☐

12. በዉል ሰነዱ ላይ አለመግባባትን የማሰወገጃ አንቀጾች ይኖራሉ ?

ሁልጊዜ ☐ አልፎ አልፎ ☐ የለም ☐ አይታወቅም ☐

4.2 . በዋና ተቋራጩና በንኡስ ተቋራጭ መካከል በሚገቧቸዉቻ ዉሎች ምክንያት ነግንኙነታቸዉ ላይ ችግር የሚያመጡ ሁኔታዎችን መመዘን

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣ (1) = በጣም እስማማለሁ፣ (2) = እስማማለሁ ፣ (3) = ገለልተኛ ነኝ ፣ (4) = አልስማማም ፣ (5) = በጣም አልስማማም

ተ.ቁ	በዋና ሥራ በተቋራጮች እና በንዑስ ተቋራጮች መካከል በሚገቧቸዉቻ ዉሎች ምክንያት ነግንኙነታቸዉ ላይ ችግር የሚያመጡ ሁኔታዎች	1	2	3	4	5
4.2.1	ሕግ አለማክበር/ መጣስ፣					
4.2.2	በሰነዱ ላይ ያሉ አሻሚነት፣					
4.2.3	በዉል ሰነዱ ላይ የአንቀጾች ስህተት እና አለመካተት፣					
4.2.4	በዉል ሰነዱ ላይ የክፍያ ሁኔታ ግልጽ አለመሆን					
4.2.5	ዋና ተቋራጩ የራሱን ጥቅም ለማስጠበቅ ሲል ዉሉን ሲያቋርጥ					
4.2.6	በዋና ተቋራጭ ወይም በንኡስ ተቋራጭ ጥሩ ያልሆነ ፕሮጀክት አስተዳደር					
3.2.7	የዉል ሰነዱ ያልተሟላ መሆን፣					
4.2.8	በዉሉ ተግባራዊነት ላይ የጠበቀ እምነት አለመኖር፣					

ሌላ ካለ ይጥቀሱ _____፣

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4.3 .በዋና ተቋራጨና በንኡስ ተቋራጭ መካከል በሚገቧቸዉቻ ዉሎች ምክንያት የሚመጡ ችግሮችን ለመፍታት የሚረዱ ሁኔታዎች

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣ (1) = በጣም እስማማለሁ፣ (2) = እስማማለሁ ፣ (3) = ገለልተኛ ነኝ ፣ (4) = አልስማማም ፣ (5) = በጣም አልስማማም

ተ.ቁ	በዋና ተቋራጨና በንኡስ ተቋራጭ መካከል በሚገቧቸዉቻ ዉሎች ምክንያት የሚመጡ ችግሮችን ለመፍታት የሚረዱ ሁኔታዎች	1	2	3	4	5
4.3.1	ዎሎች ሲዘጋጁ የስራዉን ስፋት እና መጠን በደንብ ማካተት አለባቸዉ፣					
4.3.2	የዉል አንቀጾች ግልጽ ሆነዉ መጠቀጽ አለባቸዉ					
4.3.3	በዋና ተቋራጨና በንኡስ ተቋራጭ መካከል ግልጽ ግንኙነት እና መረጃ ልዉዉጦች መኖር					
4.3.4	በዉል ሰነዱ ላይ አለመግባባትን የማሰወገጃ አንቀጾች መኖር፣					
4.3.5	በዉል ሰነዱ ላይ የክፍያ አፈጻጸምን የሚገልጹ አንቀጾች መኖር፣					

ሌላ ካለ ይጥቀሱ _____፣

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ክፍል 5 የክፍያ አፈጻጸምን በተመለከተ በዋና ተቋራጭና በንዑስ ተቋራጭ መካከል ያለ ግንኙነት

1. በዋና ተቋራጩ ለንዑስ ተቋራጩ የሚከፈለዉ ክፍያ መሆን አለበት ብሎ የሚያስበዉ

ስራዉ ከተጠናቀቀ በኃላ ☐ የመጀመሪያ ርክክብ ሲፈፀሙ ☐

የመጨረሻ ርክክብ ሲፈፀሙ º☐ ሌሎች ----------

2. የክፍያ መልቀቅን አስመልክቶ በዋና ተቋራጭና በንኡስ ተቋራጭ መካከል የሚነሳ ጥያቄና ከርክር አለ?

ሁል ጊዜ ☐ አልፎ አልፎ☐ የለም ☐ አይታወቅም ☐

3. በዋና ተቋራጭ በኩል ለንኡስ ተቋራጭ የክፍያ መልቀቅን እንዲዘገይ ሚያደረጉት ምክንያቶች ወይም ሁኔታዎች

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣ (1) = በጣም እስማማለሁ፣ (2) = እስማማለሁ ፣ (3) = ገለልተኛ ነኝ ፣ (4) = አልስማማም ፣ (5) = በጣም አልስማማም

ተ.ቁ	በዋና ተቋራጭ በኩል ለንኡስ ተቋራጭ የክፍያ መልቀቅን እንዲዘገይ ሚያደረጉት ምክንያቶች ወይም ሁኔታዎች	1	2	3	4	5
5.3.1	የተቋራጩ የገንዘብ ችግር ነዉ					
5.3.2	እምነት አለመኖር ሃላፊት ያለመዉሰድ					
5.3.3	በዉሉ መሰረት ሲከፈለዉ መክፍል በሚል እሳቤ					
5.3.4	የአሰሪዉ የገንዘብ አቅም ደካማ መሆን					
5.3.5	በተሰራዉ ስራ መጠን ልዩነት አለመግባባት					
5.3.6	ጥሩ የሆነ የፋይል አያያዝ አለመኖር እና ከዋናዉ እቀድ መዉጣት ወይም መለየት					
5.3.7	ዉላቸዉ ላይ የክፍያ አፈጻጸም ህጎች ዋና ተቋራጩ የለንኡስ ተቋራጭ ክፍያዎችን እንዲያዘገይ መፍቀድ					
5.3.8	በዋና ተቋራጭ በኩል ለንኡስ ተቋራጭ መካከል በሌሎች ጉዳዩች ያለመግባባት መፈጠር					
5.3.9	የክፍያ ሰርቲኬት መዘግየት					

ሌላ ካለ ይጥቀሱ _____

4. በዋና ተቋራጭ በኩል ለንኡስ ተቋራጭ የክፍያ መዘግየትን ለማሻሻል የሚረዱ ሁኔታዎች

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣ (1) = በጣም እስማማለሁ፣ (2) = እስማማለሁ ፣ (3) = ገለልተኛ ነኝ ፣ (4) = አልስማማም ፣ (5) = በጣም አልስማማም

ተ.ቁ	በዋና ተቋራጭ በኩል ለንኡስ ተቋራጭ የክፍያ መዘግየትን ለማሻሻል የሚረዱ ሁኔታዎች	1	2	3	4	5
5.4.1	ክፍያዎችን በዉሉ መሰረት መፈጸም					
5.4.2	ለክፍያዎች መዘግየት በዉል ዉስጥ የቅጣት አንቀጾች ማካተት					
5.4.3	በዋና ተቋራጭ በኩል ለንኡስ ተቋራጭ መካከል እምነትን ማዳበር					
5.4.4	ከዋና ተቋራጩ ጋር ጥሩ ግንኙነት እና የመረጃ ልዉዉጥ መኖር					
5.4.5	የክፍያ ደረሰኞችንና ፋይሎችን ባግባቡ ማስቀመጥ					
5.4.6	ቋሚ የክፍያ መፈጸሚያ ፕሮግራም አዉጥቶ በመክፈል መስማማት					
5.3.7	ከባለቤት መስሪያቤት ጋር መደራደር					

ሌላ ካለ ይጥቀሱ _____፣

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ክፍል 6: ንዑስ ተቋራጮች በዋና ተቋራጮች ተወዳዳሪነት ላይ የሚስከትሉት ተጽኖ ምንድን ነዉ (በ አሰሪዉ /ባለቤት/ለሚመረጡት እና ዋና ተቋራጩ ለሚመረጡትም ንዑስ ተቋራጮች)

6.1 ንዑስ ተቋራጭ በዋና ተቋራጭ ተወዳዳሪነት ላይ የሚኖረዉ ጠንካራ ጎን

(X ወይም √) ምልክት ያደርጉ

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣, (1) = በጣም እስማማለሁ, (2) = እስማማለሁ (3) = ገለልተኛ ነኝ, (4) = አልስማማም, (5) = በጣም አልስማማም

No	በዋና ተቋራጩ ተወዳዳሪነት ላይ የሚኖረዉ ጠንካራ ጎን	1	2	3	4	5
6.1.1	ምርታማነት ይጨምራል					
6.1.2	አንደሁኔታዉ ተለዋዋጭነት መሆንን ያሻሽላል					
6.1.3	የስራዉን ጥራት ያሻሽላል					
6.1.4	ወጪን ለመቆጣጠር ቀላል ያደርገዋል					
6.1.5	የስራ መዘግየትን ይቀንሳል					
6.1.6	የተጨማሪ ጉልብት አጠቃቀም እና የቁሳቁስ ጥገና ያስቀራል					

ሌላ ካለ ይጠቀስ _____

6.2 በንዑስ ተቋራጭ ዋና ተቋራጭ መካከል ያለ ደካማ ግንኙነት በዋና ተቋራጩ ተወዳዳሪነት ላይ የሚስከትለዉ ተፅኖ (X ወይም √) ምልክት ያደርጉ

ለእያንዳንዱ መመዘኛ ጥያቄ ከሚከተሉት አንድ ነጠብ ይይዛል፣(1) = በጣም እስማማለሁ, (2) = እስማማለሁ (3) = ገለልተኛ ነኝ, (4) = አልስማማም, (5) = በጣም አልስማማም

ተቁ	በንዑስ ተቋራጭ ዋና ተቋራጭ መካከል ያለ ደካማ ግንኙነት በዋና ተቋራጩ ተወዳዳሪነት ላይ የሚስከትለዉ ተፅኖ	1	2	3	4	5
6.2.1	ተጨማሪ ጊዜ በመዉሰድ የግንባታ መዘግየት ያስከትላል					
6.2.2	ተጨማሪ ወጪ ያሰከትላል					
6.2.3	ደከማ የፐሮጀክ ጥራት					
6.2.4	በፕሮጀክቱ አካላት ዘንድ ቅሬታና አለመግባባት ይፈጠራል					
6.2.5	ወደ ሽምግልናና ግልግል ያስገባል					
6.2.6	ወደ ሙግትና ክርክር ያስገባል					
6.2.7	ፕሮጀክቱን ተንጠልጥሎ እንዲቆ ወይም ወደ ማቋረጥ ያመራል					

ሌላ ካለ ይጠቀስ _____

_____

አመሰግናለሁ!

Appendix C: Semi-structured Interview

Personal questions :

1. What is category of your company?
2. How long have you worked in 20/80 construction projects?

Main questions:

3. How do you see overall nature of relationship of Main contractor and subcontractor in 20/80 condominium projects?
4. Who is responsible for the selection of subcontractors and what are the key selection criteria?
5. Is there a dispute between main Contractor and subcontractor? (specifically due to signed contract document and payment practice) If so, what are the reasons behind and what approaches are used to resolve this?
6. Is there a coordination problem between Main contractor and subcontractors? What are the reasons?
7. What type of contract agreements are signed between main contractor and subcontractor?(oral, Written or legal)
8. When did the main contractor want to release payments to the subcontractors?
9. In the future, What practice should be changed to improve the main contractor - subcontractor relationship problems?
10. What do you consider about the reasons for main contractors to use subcontractors?

Appendix D: Agreement Forms

Nominated and Domestic Sub-contractors Agreement Forms

ADDIS ABABA HOUSING CONSTRUCTION PROJECT OFFICE,
PROJECT 13 BRANCH OFFICE

Main Agreement

FOR

AGROSTONE BOARD INSTALLATION WORKS SUB-CONTRACT WORKS
TWO BLOCKS (O-G+7 L-SHAPE (741) & O-G+7 LINEAR (755))
AT BOLE ARABSA SITE

Between

SGAM CONSTRUCTION (the Main Contractor),AAHDC P-13(the Client)

and

ABERA GIRMA DAME G.C (the Sub Contractor)

JULY, 2018

Main Aggrement
For
Assembly and Fixing of Metal Door & Window Sub Contract Works

This addendum is made on the day of the **4th** of **July , 2018** by and between **SGAM CONSTRUCTION** (herein after referred to as **"the Main Contractor"**) on one part and ASSEMBLY AND FIXING OF METAL DOOR & WINDOW WORKS sub contract Works' MSE **Tesfahun Asfaw wood & Metal Work** (herein after referred to as "the Sub Contractor") on the other part with reference to the following facts:

Whereas **THE CONTRACTOR** is engaged in the business of caring out the construction of cost efficient apartments based on the contract signed with the sub city housing development project branch office.

Whereas the **SUB CONTRACTOR** is nominated by the sub city housing development branch office.The contractor desires to retain the services of the sub-contractor and the sub-contractor desires to be retained as door producing and installing contractor up on the terms and conditions set forth herein.

Whereas **Beles Consult PLC** (hereinafter called the "**Consulting Engineer**") has been appointed to administer this contract.

Article 1: Appointment

1.1 The project 13 housing development branch office here by appoints the sub contractor as door producing and installing specialist contractor to provide services as determined here under, upon the terms and subject to the conditions set forth herein. The contractor hereby accepts the appointment.

Article 2: Scope of Services

2.1 The services to be performed by the sub contractor for the assembly and fixing of metal door & window works include:

a) Produce metal door and window along with all required accessories to be included (except glass) as per the design provided from the client.
b) Transport the product from ground floor upto last floor of the building.

c) Fix/install the door into the opening appropriately grout and coat with mortar.
d) Others

2.2 In the performance of services specified in sub article 2.1, the sub contractor shall use this best effort to promote the interest of the client, the main contractor and conditions of this contract.

Article 3: Service Fee

3.1 In consideration of the payment to be made by the client, the sub contractor hereby covenant with the contractor to execute and complete the works and remedy any defects therein in conformity in all respects with the provision of the contract, and the contractor hereby covenants with the client to approve the execution and completion of the works in all respect with the provision of the contract and the client hereby covenant to pay the sub contractor in consideration of the approval given by the contractor for the execution and completion of the works and remedying of defects as per the price index attached in this contract document (Annex I) at the terms and in the manner prescribed by the contract document.

3.2 In consideration of the payment to be made by the client to the sub contractor, prior approval of the works by the contractor and consulting engineer is mandatory.

3.3 The payment for sub-contractor by the client is effective as per the payment schedule (Annex-I) of this contract.

Article 4: Financial Responsibility of the sub contractor

4.1 Without prejudice to the provisions of the AGREEMENT, the sub contractor shall be responsible to pay any taxes, duties, dues and any charges that may be assessed or imposed by the government on the service fee he receives from the client pursuant to this AGREEMENT.

Article 5: Duties and Responsibilities of the client

5.1 The client will pay the payment amount as per the schedule and price index of annex I of this contract to the sub contractor after the final approval of the works by the contractor and consulting engineer.

5.2 The client shall supply all the required materials to the contractor.

5.3 The client will pay service fee for the contractor after the final approval of the consulting engineer.

Article 6: Duties and Responsibilities of the Contractor

6.1 The contractor has responsibility to request all the required materials from the client on time and deliver to the sub contractor. In this case the contractor is responsible for all these materials if there is damage on the material. If the damage is occurred in his hand before the hand over of these materials to the sub contractor.

6.2 All the required materials are collected and transported from the client store by the contractor. Cement, sand and water required for fixing the door are supplied by the contractor.

6.3 The contractor will assist the sub contractor if the need arises

6.4 The contractor shall be responsible for the approval of the completion of the works as per the contract agreement.

Article 7: Duties and Responsibilities of the sub contractor

7.1 The sub contractor has the responsibility to work as per the plan and specification of the respective work. The contractor will assign a supervisor to check and follow the quality of the work.

7.2 The sub contractor will start the work after he receives the appointment from the project 18 housing development branch office..

7.3 The sub contractor will request material from the contractor and used with due care and diligence. In this case, the contractor will take the responsibility for all the damages on the materials and works that occurred during construction.

7.4 The subcontractor will take full responsibility if there is any problem on the quality and measurement of the works performed by him.

7.5 The sub contractor also has the responsibility to work and complete the work as per the master schedule of contract.

7.6 If the sub contractor receives excess material with respect to the material required for that work, he has the responsibility to return to the contractor.

7.7 The sub contractor cannot transfer this work to the third party.

Article 8: Contract Administration

8.1 **THE CONSULTING ENGINEER** shall be responsible for interpreting and administrating the contract in accordance with the contract document and witness the agreement hereunder.

8.2 The consulting engineer shall be responsible for the approval of the completion of the work according to the contract agreement

Article 9: Termination of Contract

9.1 Termination of this contract cannot be done without giving one week's prior notice to the client and the other party.

Article 10: Governing Law

10.1.1 This AGREEMENT shall be considered, interpreted and applied in accordance with the laws in force in the federal Democratic Republic of Ethiopia.

Article 11: Effective Date and Duration

This AGREEMENT shall come into force on the date first above written and shall remain in effect for project period specified on the contract unless it is terminated with a prior written notice of Article 9.

Concluded between **PROJECT 13 HOUSING DEVELOPMENT BRANCH OFFICE** and **Tesfahun Asfaw wood & Metal Work** IN WITNESS WHEREOF the contracting parties, through their duly authorized representative, have affixed respective names and signatures in the date first above mentioned.

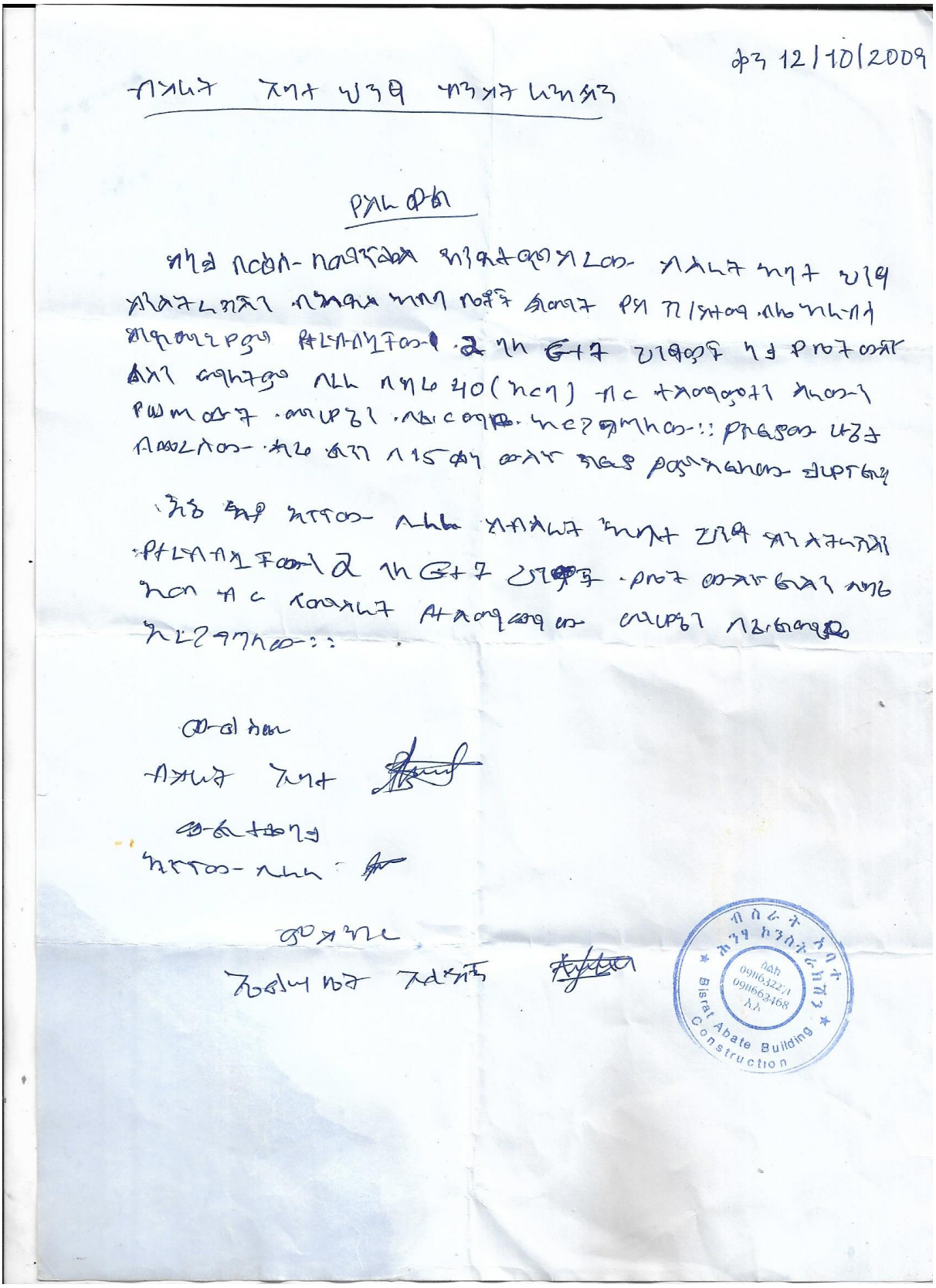
The parties through their authorized representatives have signed this aggrement on the aforementioned date.

On behalf of client ***On behalf of the main contractor*** ***On behalf of the sub contractor***

_____ _____ _____

Witnesses

Name	**Address**	**Signature**
1. _____	_____	_____(the client)
2. _____	_____	_____(the client)
3. _____	_____	_____(theclient)
4. _____	_____	_____ (the contractor)
5. _____	_____	_____ (the contractor)
6. _____	_____	_____ (the sub-contractor)
7. _____	_____	_____ (the sub-contractor)
8. _____	_____	_____ (the consulting Engineer)
9. _____	_____	_____ (the consulting Engineer)



ቀን 12/10/2009

ለአለት አማተ ህንፃ ሥንዛቤ ኩባንያ

የአሉ ጉዳይ

ከላይ በርዕሱ-ከወጣዉ ስንጠቀሰዉ አለአለት አማተ ህንፃ ሥራቤ ኩባንያ ለእኛ ከሚሰጠዉ ሥራ ውስጥ ቁጠባ የሌ ፕሪሚክስ ለኩ ሥራ ከሚሰጠን ሥራዎች የሚቀነሰዉ የኤሌክትሪክ ፍሳሽ ከ ሥራ ቦታ ጋር በተያያዘ ካፃ የሥራ መደብ ለእኛ ሰጥተናል ለኩ ለሳሌ 40(ከሰባ) ፐር ተጨማሪ ሥራዎች የሠሙልኝ . መሠረት ፣ ለጠር ሰጥተ. ኩር? ሰጥተናል:: የኤሌክትሪክ ሀጋ ለመጀመሪያ-ጥሬ ወጪ ለ15 ቀን መሠረ ክፍያ የሚሠራልኩ-ይሆናል

ስለዉ ቅሬ ከገኘሁ- ለኩ ለተጨለት ሥራዉ ጀምሩ ለእኛ ለኤሌክትሪክ ፍሳሽ ኤሌክትሪክ ከ ሥራ ቦታ ጋር ተያያዥ . የሥራ መደብ ስለእኛ ሥራ ከሰጠ ፐር ሰጠመጀመሪያ ለጠር ሰጥተ ለጠራልኝ ይሆናል::

ለአለት አማተ

ከገኘሁ- ኩር

ለቀለመ ወልደ ጊዮርጊስ