



**ADDIS ABABA UNIVERSITY**

**COLLEGE OF BUSINESS AND ECONOMICS SCHOOL OF COMMERCE**

**DEPARTMENT OF PROJECT MANAGEMENT**

**ASSESSMENT OF THE CONTRACT MANAGEMENT PRACTICES IN ETHIOPIAN  
FEDERAL ROAD CONSTRUCTION PROJECTS**

*By Yehyes Dereje*

**Advisor: Solomon Markos (PhD)**

**November, 2021**

**Addis Ababa, Ethiopia**

**ASSESSMENT OF THE CONTRACT MANAGEMENT PRACTICES IN ETHIOPIAN  
FEDERAL ROAD CONSTRUCTION PROJECTS**

*By Yehyes Dereje*

**Advisor: Solomon Markos (PhD)**

A Research Project Submitted to Addis Ababa University School of Commerce in Partial  
Fulfillment of the Requirements for the Degree of Masters of Project Management

**November, 2021**

**Addis Ababa, Ethiopia**

**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF BUSINESS AND ECONOMICS SCHOOL OF COMMERCE**  
**DEPARTMENT OF PROJECT MANAGEMENT**

This is to Certify that the project work prepared by Ato Yehyes Dereje, entitled “ASSESSMENT OF THE CONTRACT MANAGEMENT PRACTICES IN ETHIOPIAN FEDERAL ROAD CONSTRUCTION PROJECTS” submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Project Management complies with the regulations of the University and meets the accepted standards with respect of originality and quality.

**Signed by the Examining Committee:**

Solomon Markos (PhD)

Advisor:

\_\_\_\_\_  
Signature:

\_\_\_\_\_  
Date:

Dakito Alemu (PhD)

Internal Examiner:

\_\_\_\_\_  
Signature:

\_\_\_\_\_  
Date:

Afewerk (PhD)

External Examiner:

\_\_\_\_\_  
Signature:

\_\_\_\_\_  
Date:

## **DECLARATION**

I, Yehyes Dereje, declare that the research project entitled “ASSESSMENT OF THE CONTRACT MANAGEMENT PRACTICES IN ETHIOPIAN FEDERAL ROAD CONSTRUCTION PROJECTS” is my own original work, and has not been submitted for any degree in any other University. All sources of materials used for this study have been duly acknowledged

Name        Yehyes Dereje

Signature:

Date:

## CERTIFICATION

This is to certify that Yehyes Dereje has conducted this project work entitled ““ASSESSMENT OF THE CONTRACT MANAGEMENT PRACTICES IN ETHIOPIAN FEDERAL ROAD CONSTRUCTION PROJECTS” under my supervision. This project work is original, and suitable for the submission in partial fulfillment of the requirement for the award of Master of Arts Degree in Project Management.

Name            Solomon Markos (PhD)  
\_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **ABSTRACTS**

*This research assessed the Contract Management Practice in Federal Road Construction Projects which intern attempts to maximize the return on investment through meeting the project's objectives. The study took a form of descriptive design. The data were collected qualitatively using questionnaires surveys and desktop studies. Accordingly, questionnaires were distributed to the three key groups of participants in road construction projects; namely the Employer, Consultants, and Contractors, who are participating on road construction projects where their project progress is above 70%. The findings show that the Contract Management practice is not found to be efficient as a result projects are not completed on time, within the budgeted cost, and with desired quality. Among others, poor communication and poorly drafted contracts are found to be the major problems in project contract administration contracts. It is recommended that improving contract administration with complying project's requirements and properly drafting the contract will have great impact on the progress of projects. The study will help the government, implementing agencies, professionals, and other interest groups to concentrate on the areas of weakness in managing contracts in the road projects to enhance the implementation of the project and the realization of the project objectives.*

***Keywords: Project, Contract Management, Progress of Project, Road Sector Development Program (RSDP), Ethiopian Roads Authority***

## **Acknowledgement**

This project work would not have been possible without Dr. Solomon M, whose guidance from the initial step in research enabled me to develop in depth understanding of the subject despite the various hurdles I encountered during preparation of this work.

I am grateful for my wife, Rediate Wujira and My beloved son, Barkon Yehyes whose constant love and support keep me motivated and energized throughout the entire research work. My accomplishments and success are because they believed in me and gave me continuous encouragement without them I wouldn't go this far. My deepest thanks go to Wro Fitsum Hailu, who provided me continuous advice and encouragement and helps me in realization of the final thesis.

Above all, my thanks go to the Almighty God for giving me the health, strength and endurance.

Table of Contents

<b>CHAPTER 1. INTRODUCTION .....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.2 Statement of the Problem.....	2
1.3 Basic Research Questions .....	3
1.4 Objective of the Study .....	3
1.4.1 General Objective of the Study .....	4
1.4.2 Specific Objectives of the Study .....	4
1.5 Significance of the Study .....	4
1.6 Scope of the Study .....	5
1.7 Limitation of the Study .....	5
1.8 Definition of Terms.....	5
1.8.1 Conceptual Definition .....	5
1.8.2 Operational Definition.....	6
1.9 Organization of the Study .....	6
<b>CHAPTER 2. REVIEW OF RELATED LITERATURE .....</b>	<b>7</b>
2.1 Introduction.....	7
2.2 Theoretical Review .....	7
2.2.1 Project and Project Management.....	7
2.2.2 Project Delivery Type .....	8
2.2.3 Contract Management life cycle .....	11
2.2.4 Contract Administration.....	14
2.2.5 Challenges of Contract Administration.....	21
2.2.6 Contract Management Success.....	22

2.3	Empirical Review of Related Literature .....	23
2.3.1	Work program .....	23
2.3.2	Payment Process.....	23
2.3.3	Variation.....	23
<b>CHAPTER 3. RESEARCH DESIGN AND METHODOLOGY.....</b>		<b>24</b>
3.1	Introduction.....	24
3.2	Research Paradigm, and Approach .....	24
3.2.1	Research Setting.....	24
3.2.2	Organizational context .....	24
3.2.3	Research Approach .....	25
3.2.4	Research Design/type.....	25
3.3	Research Population and Sampling Design .....	25
3.3.1	Target Population .....	25
3.3.2	Sampling Frame .....	26
3.3.3	Sampling Technique.....	27
3.3.4	Sample Size .....	27
3.4	Data Collection .....	28
3.4.1	Primary Source.....	28
3.4.2	Secondary Source.....	28
3.5	Data Collection Methodology.....	28
3.5.1	Data Collection Instrument .....	28
3.6	Data Analysis Methods .....	29
3.7	Scale and Reliability .....	30
3.8	Validity .....	31

3.9	Ethical Consideration.....	31
<b>CHAPTER 4. RESULTS AND DISCUSSION.....</b>		<b>32</b>
4.1	Introduction.....	32
4.2	General.....	32
4.2.1	Response rate and Demographic Data .....	32
4.2.2	Origin of the Entities .....	33
4.2.3	Respondents' Organization Years Establishment .....	34
4.2.4	Respondents' Organization Experience in Federal Road Project .....	34
4.2.5	Respondents' Personal Experience in Road Construction Project.....	35
4.2.6	Respondents' Education Background .....	35
4.3	Contractual Compliances .....	36
4.3.1	Securities and Insurances .....	36
4.3.2	Work Program .....	37
4.3.3	Reports .....	38
4.4	Monitoring and Evaluation .....	38
4.5	Claim and Dispute Administration .....	39
4.5.1	Time Extension .....	39
4.5.2	Cost Claims .....	39
4.5.3	Dispute on Project .....	40
4.5.4	Administration of Claims and Disputes .....	41
4.6	Payment Process Administration .....	42
4.7	Management of Change .....	42
4.8	Contract Closing Out .....	43
4.9	Challenges and Problems in Contract Administration.....	44

4.9.1	Major Challenges in Administration of the Contract .....	44
4.9.2	Main challenges and problems Related to Administration of Contract .....	45
4.10	Advantage of Proper Contract Management.....	45
4.11	Interpretation and Discussion .....	46
4.11.1	Contractual Compliances .....	46
4.11.2	Monitoring and Evaluation.....	48
4.11.3	Claim and Dispute Administration.....	48
4.11.4	Payment Process Administration .....	49
4.11.5	Change Management.....	50
4.11.6	Contract Closing Out.....	50
4.11.7	Challenges and Problems in Contract Administration .....	50
4.11.8	Advantage of Proper Contract Management.....	51
4.11.9	Comprehensive Interpretation of result.....	51
<b>CHAPTER 5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS .....</b>		<b>54</b>
5.1	Introduction.....	54
5.2	Summary .....	54
5.3	Conclusions.....	54
5.4	Recommendations.....	56
5.5	Limitation and Suggestion for further study .....	57
<b>References .....</b>		<b>59</b>
<b>Appendices.....</b>		<b>62</b>
Research Instrument.....		62
List of Tables		
Table 3-1: Cronbach Alpha Value .....		30

Table 4-1[ Response Composition and Rate] .....	33
Table 4-2:[Securities and Insurances].....	36
Table 4-3:[Work Program] .....	37
Table 4-4:[Reports].....	38
Table 4-5:[Monitoring and Evaluation] .....	38
Table 4-6:[Time Extension].....	39
Table 4-7:[Cost Claim] .....	39
Table 4-8:[Claims] .....	41
Table 4-9:[Dispute].....	42
Table 4-10:[Payment Process] .....	42
Table 4-11:[Change Management] .....	43
Table 4-12: [Contract Closing out].....	43
Table 4-13:[Problems in Contract Administration] .....	44
Table 4-14: [Challenges in Contract administration].....	45
Table 4-15:[ Advantage of Contract Management] .....	45
Table 4-16: [Advantage of Contract Management] .....	46
Table 4-17:[Summary of Components] .....	52
Table 4-18:[ Attribute].....	52
List of Figures	
Figure 2-1:[Phase of Design- Bid- Build Project] .....	10
Figure 2-2:[ Design and Build Project Phase] .....	11
Figure 4-1:[Response Rate and Composition].....	33
Figure 4-2:[ Origin of Company of Respondent] .....	33
Figure 4-3:[ Years of Organization Establishment of Respondent].....	34

Figure 4-4:[ Years of Experience in Federal Road Project] ..... 35

Figure 4-5:[Personal Experience in Road Construction Project]..... 35

Figure 4-6:[Educational Background] ..... 36

Figure 4-7 [Number of Claims Per Projects] ..... 39

Figure 4-8: [Number of Cost Claims]..... 40

Figure 4-9: [Number of Dispute] ..... 40

## **ABBREVIATIONS**

<b>CDs</b>	Contract Documents
<b>CMS</b>	Contraction Managed Standard
<b>DBB</b>	Design Bid Build
<b>DB</b>	Design and Build
<b>DDs</b>	Developmental Drawings
<b>DRE</b>	Dispute Review Expert
<b>ERA</b>	Ethiopian Roads Authority
<b>EOT</b>	Extension of Time
<b>FDRE</b>	Federal Democratic Republic of Ethiopia
<b>MS</b>	Mean Score
<b>PMBOK</b>	A Guide to the Project Management Body of Knowledge
<b>PMI</b>	Project Management Institute
<b>RSDP</b>	Road Sector Development Program
<b>RRAs</b>	Regional Road Authorities
<b>SLAs</b>	Service Level Agreements
<b>VfM</b>	Value for Money
<b>VO</b>	Variation Order
<b>WRO</b>	Woreda Road Offices

## **CHAPTER 1. INTRODUCTION**

### **1.1 Background of the Study**

Road construction projects are means through which development objectives are achieved. With the view of attaining such objective different projects are procured using various alternative project delivery systems in program and then the implementation process comes into picture. Successfully, completing the construction project is critical. It is evident that not only completion of the project and making the road sustainable also have noticeable impact on the overall life time of the project during operation and maintenance of the road (ERA 2014).

In federal road construction projects, contractor is required to complete the project on time, with a specified quality and cost. The objectives of the project management are completing the project within the budgeted cost, allocated time and with the specified quality when all the project's objectives are met, we could say the project is successfully completed and the colossal amount of the budget allocated to it is effectively utilized (ERA 2014).

Road construction projects are means through which development objectives are achieved. Various efforts to develop the road sector have been made to ensure projects' success. Despite these efforts, however, there still remain problems of delay and cost overrun on most of the road construction projects in Ethiopia (ERA 2014).

This research answers the question “What are the key factors of effective contract management for construction road project? it helps in pinpointing areas that needs improvement or /are deterrent to the achievement of project ‘s objectives.

In the context of Ethiopia's geography, pattern of settlement and economic activity, transport plays a vital role in facilitating economic development. In particular, it is road transport that provides a means for the movement of people, utilization of land and natural resources, improved agricultural production and marketing, access to social services, and opportunities for sustainable growth (ERA 2014).

Recognizing, the importance of the road transport in supporting social and economic growth and its role as a catalyst to meet poverty reduction targets, the Government of Ethiopia has placed increased emphasis on improvement of the quality and size of road infrastructure in the country. To address constraints in the road sector, many low road coverage and poor condition of the road

network, the Government formulated the Road Sector Development Sector Development Program since 1997 (ERA 2014). ERA is one of the major implementing agencies of this RSDP with administration of the federal road networks and the construction and maintenance of roads.

In 2014 ERA has conducted assessment of the Road Sector Development Program, the report has outlined the challenges ERA has faced during the realization of RSDP, among the challenges, according to ERA (2014), delay in completion of the construction projects within the budget and within the contract time has been stated as major. Therefore, this study will attempt to assess how the contract is managed in these federal road projects so that emphasis would be given to the areas needs to be managed to properly administer projects to realize their main objectives of the project.

## 1.2 Statement of the Problem

As discussed in ERA (2014), most of the road construction projects are not completed within the contract time, budgeted cost and to the specified standard and it has been one of the major problems during realization of the goal stipulated on RSDP.

In the context of Ethiopia, road is the most important infrastructure that provides access to rural and urban areas in the country. Road plays crucial role to reduce transportation cost and support economic growth in the country. However, in the late 1990s; the road network coverage was limited to major urban areas and some rural areas. Most areas in the country were isolated from economic centers, market and basic social services. The existing road network was largely deteriorated and in poor condition. (ERA, 2014)

The Government of Ethiopia has well recognized that limited road network coverage and poor condition of the existing road network has been an impediment to economic recovery and economic growth. Therefore, to address the problems in the road sector; the Government has launched the Road Sector Development Program (RSDP) in 1997. Since then, four phases of RSDP were implemented over the period of 1997 – 2015 and the fifth phase; RSDP V has been implemented since July 2015.

- RSDP I -From July 1997 to June 2002 (5 years plan)
- RSDP II -From July 2002 to June 2007 (5 years plan)
- RSDP III -From July 2007 to June 2010 (3 years plan)

- RSDP IV -From July 2010 to June 2015 (5 years plan)
- RSDP V - From July 2015 to June 2020 (Ongoing)

Over twenty-one years of RSDP, physical works consisting of rehabilitation and upgrading of trunk and link roads, construction of new link roads, rural roads & district roads and maintenance of federal and regional roads have been carried out by Ethiopian Roads Authority (ERA), Regional Roads Authorities (RRAs) and Woreda Road offices (WRO) and the community and municipalities. Series of policy and institutional reforms have been implemented in the sector, which have enhanced implementation capacity of road projects and effectiveness of Road Asset Management (ERA, 2014).

ERA (2021) evaluation of project shows that currently 207 projects are running in the authority and only 47% of the projects are passing the authorities performance rating, it clearly shows that the projects are not meeting the project objectives.

According to the report by Ministry of Finance (2015), one of the main problems which leads to project's failure is failure in properly managing and administering the project's contract which leads to dispute, prolonged completion of projects and increased cost. Effective contract management starts from the initiation of the project life cycle and it is completed at the completion of the project, sometimes it goes beyond the physical completion of the project.

This research, however, focuses on Assessment of the Contract Management Practices in Federal Road Construction Projects in Ethiopia in the implementation stage of the project's life cycle.

### 1.3 Basic Research Questions

The basic research questions for this research are listed herein under

- A. Which Contractual issues are managed properly?
- B. What are the major problems in contract administration?
- C. What are the issues in contract administration for completing the project within the contract time, budgeted cost and quality?

### 1.4 Objective of the Study

#### 1.4.1 General Objective of the Study

The general objective of this research project is to assess the contract management practice in the construction of federal road projects and to integrate conceptual material with the practical experience in federal road construction projects in Ethiopia.

#### 1.4.2 Specific Objectives of the Study

The specific objectives of the research project are:

- To assess which contractual issues are managed properly.
- To assess the challenges in administrating the contract
- To recommend where should be given emphasis on the contract management to complete the project within the contract time and cost and avoid dispute.

#### 1.5 Significance of the Study

Huge amount of the national budget is allocated for the construction of the road; therefore, success of the projects means success of the overall countries development program. Hence, assessing the contract management and indicating the area of improvement will give the implementing agency ERA, consultants and contractor where to focus during construction of the road projects. In addition, this research study will also serve as a basis for future related researchers on this or related area.

This research study is significant for project owners (government, agencies, companies and individuals) and consultants, knowing the current contract management practice will provide a benchmark to evaluate the construction projects so that the capacity of the implementation of the road project will be improved. It will also give them an insight on where should one concentrate to successfully manage contract in the road construction projects.

Further, it will give an in-depth insight about the current contract management practice in Ethiopian Federal Road construction projects in turn it will enhance the way contracts are going to be on road projects which are undergoing or that is going to be started in the future.

The study will also help the contractors on where shall to give attention in his management of road construction projects so that it could accomplish the projects on time, within budgeted cost, to the desired quality and safely and also avoid unnecessary dispute.

## 1.6 Scope of the Study

In this research attempt is made to assess the contract managing practice in Ethiopian Federal road construction projects which are undertaken in Ethiopian Roads Authority and the research dose not assess the maintenance projects since the nature of maintenance projects are significantly different from construction project. Professionals from the Contracting Agency (ERA), the contractor and consultant, who were involved on construction of federal road projects will be contacted and requested to respond to the questioners.

## 1.7 Limitation of the Study

The assessment has limitation as it doesn't assess the contract administration in regional road authorities, thus its applicability is limited to the construction of Federal Road Projects. Absence of qualitative methods due to resource limitation and the prevalence of CoVID-19, the information gathered has an impact on the study.

## 1.8 Definition of Terms

### 1.8.1 Conceptual Definition

The project and project management are interchangeably used in different management journal and book; however, they have distinct behavior even though they share the same thing as project management is a subset of the project. In this research these main concepts are considered distinct as it should be and the following definitions are used to define the concepts.

- I. **Project** is defined as a temporary endeavor under taken to create a unique product, service, or result (PMI 2013).
- II. **Project Management** is the process controlling the achievement of the project objectives (Munns and Bjeirmi 1996).
- III. **Contract is** an agreement whereby two or more persons as between themselves create, vary or extinguish obligations of proprietary nature. (Civil Code of The Empire of Ethiopia, Proclamation No. 165 of 1960)
- IV. **Contract management** is the process of actively managing contract implementation to ensure the efficient and effective delivery of the contracted outputs and/or outcomes (World Bank Procurement Guidance Contract Management Practice (2018)

## 1.8.2 Operational Definition

***Parties in Road construction:*** for this research the parties involved in road projects are the Ethiopian Roads Authority, the contractors and the consultant. Other stakeholders like financiers, local peoples, authorities are excluded to narrow the focus of the study to the main stakeholders.

## 1.9 Organization of the Study

This research proposal contains six sections. These are the introduction, literature review, the research design and methodology, references, time and budget schedule and appendixes.

**Chapter One: Introduction:** This chapter explained the background of the study, statement of the problem, objectives of the study, research questions, scope of the study, significance of the study and structure of the research.

**Chapter Two: Literature Review:** Under this chapter, the critical success factors that are measured through the project management success criteria have been discussed.

**Chapter Three: Research Methodology:** This chapter described the methodology used and procedures applied. The main topics included are research strategy, population and sampling, data collection and method of data analysis.

**Chapter Four: References:**

**Chapter Five: Conclusion and Recommendations:**

## **CHAPTER 2. REVIEW OF RELATED LITERATURE**

### **2.1 Introduction**

Under Road Sector Development Programmes (RSDP), the Government of the Federal Democratic Republic of Ethiopia (FDRE) has awarded many road projects to domestic and international contractors. From the beginning of the RSDP programme, different domestic and international contractors as well as professionals of the stream have participated in the road construction industry. The Government of Ethiopia formulated the RSDP in 1997 and till the end of 2014, the programme intends to construct 128,466km and it accomplishment until such period reported as 110,466km. From the allocated budget, local contractors' participation was 42%, involving in 278 projects (ERA 2014).

Over the past 17 years, 41.2% of the total RSDP expenditure was on rehabilitation and upgrading roads, 28.8% was on construction of link roads, 5.7% on maintenance of federal roads, 8% on regional road and 11.7% on Woreda roads and 2.8% was on institutional support projects and the remaining portion other activities at the federal level (ERA 2014).

Most of these road construction projects are not completed within the contract time, budgeted cost and to the specified standard and it has been one of the major problems during realization of the goal stipulated on RSDP. (ERA 2014) and this research will attempt to give direction on how project should be managed to be successful in order to fulfil the project's objective.

### **2.2 Theoretical Review**

#### **2.2.1 Project and Project Management**

Project is defined as a temporary endeavor under taken to create a unique product, service, or result (PMI 2013). Projects could be of different in its kind from simple to complex outputs. Depending on the project type projects might have different objectives that are required to be met. However, project management is the process of controlling the achievement of the project objectives and it has a paramount important to distinctly understand the difference between the project and the project management as project management is a subset of the project so that the success factors for each would be critically be identified and action is taken on them (Munns and Bjeirmi 1996).

### 2.2.2 Project Delivery Type

Jackson (2004), states that anyone who has ever taken on a construction project is well aware that most projects display some cost overruns, time delays, and conflicts among the various parties. Of course, the object of the game is to mitigate these risks as much as possible. One of the ways we accomplish this is by choosing the right project delivery method to start with. It is the owner who ultimately decides which project delivery method to use. Unfortunately, many owners are ill equipped to make a thorough assessment of the many factors that can impact project success relative to the owner's specific criteria. Too often they choose a traditional methodology simply because they are familiar with it. Ultimately, they end up accepting less than stellar results, not realizing that their decision for project delivery had set the stage for inefficiencies and trouble before the project even started.

It is evident that owner should carefully decide the project delivery system depending on the project type, to make the project successful, for example when the Employer (owner) does not have full knowledge on the work to be executed under the project, it is better to go for design and build strategy, even though its cost a little bit higher at the beginning of the project, it would be a smart choice at the end.

Jackson (2004) states that Project delivery is the process by which all of the procedures and components of designing and building a facility are organized and put together in an agreement that results in a completed project. The process begins with the compilation of needs and requirements of the owner spelled out in the architectural program. These needs and requirements are first expressed in preliminary plans from which initial material, equipment, and systems selections are made. With these selection decisions, the design becomes further refined until all design decisions are made and a final set of contract plans and specifications are completed.

The owner then determines which procurement methodology (purchasing steps) to use to buy the construction services and the criteria that will be used to select the contractor. Finally, the owner selects which type of contract to employ. Once selected, the contractor goes about planning an overall strategy for delivering the project in accordance with the plans and specs that have been developed. All the parts and pieces of the agreement are put in place and the game plan is

established. This game plan also determines how the players will interact and communicate with one another over the course of the project. (Jackson 2004)

Types of Project Delivery, there are basically three project delivery methods: design-bid-build, construction management, and design-build. Keep in mind that the functions associated with construction management are required in all three methods even though only one of them is actually named construction management. These three project delivery methods differ in five fundamental ways:

- The number of contracts the owner executes
- The relationship and roles of each party to the contract
- The point at which the contractor gets involved in the project
- The ability to overlap design and construction
- Who warrants the sufficiency of the plans and specifications?

Regardless of the project delivery method chosen, the three primary players—the owner, the designer (architect and/or engineer), and the contractor—are always involved. (Jackson 2004)

### **Design- Bid- Build**

Design-bid-build is commonly referred to as the traditional method of project delivery, and the traditional accountabilities apply. In this scenario, the owner first hires the architect or engineer to design the building or structure. The design professional prepares a design, moving through the three standard design phases: schematic design, design development (the design development drawings are often referred to in the industry as DDs), and finally contract documents (referred to as CDs). Under this arrangement, the design professional is usually selected on a qualifications basis and is typically paid a fee or a percentage of the building cost for his or her services. After the plans and specifications are complete, the owner selects the general contractor who will provide the construction and construction management services. The most common means for selecting the general contractor under this method is by low price or low bid: several competing contractors estimate the project based upon the contract documents and the builder with the lowest price gets the contract. The general contractor typically subcontracts various sections of the work to specialty contractors. Under this method, the owner holds two separate contracts, one with the designer and one with the contractor. In this arrangement, all dealings

between the designer and the contractor go through the owner. There is no legal agreement between the designer and the contractor. This method is very linear in nature and the contractor does not have any input regarding the design of the project. The contractor is only responsible for carrying out the work as spelled out in the plans and specs and will utilize the various construction management functions to accomplish this task. (Jackson 2004)

### **Design- Bid- Build Linear Approach**

Figure 2-1:[Phase of Design- Bid- Build Project]



No Overlap of Design and Construction

Under the design-bid-build method, the owner warrants the sufficiency of the plans and specs to the contractor. If there are gaps between the plans and specs and the owner's requirements, or any errors and omissions in the design, the owner is responsible for paying for those corrections. (Jackson 2004)

### **Design and Build**

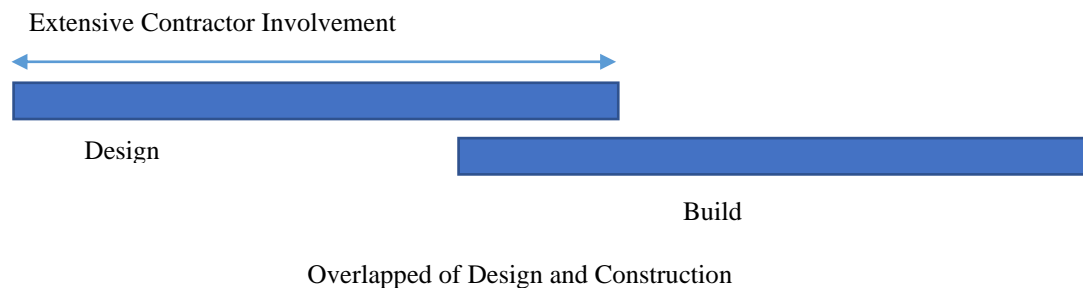
According to Jackson (2004) the design-build methodology has grown significantly in popularity over the past ten years. It is often referred to as single-source project delivery and is the closest method we have to the master builder approach of old. In this arrangement, there is only one contract. The owner contracts with a design-build entity, which will be responsible for both the design and the construction of the project. Whereas design-bid-build has linear sequencing of the work, design-build often integrates and overlaps design and construction and allows for something called fast tracking.

Under the design-build method, the design builder warrants the sufficiency of the plans and specs to the owner. The design-builder is liable for any gaps between the plans and specs and the owner's requirements for the performance of the building. If there are any shortfalls, the design-builder picks up the tab.

One of the greatest advantages to design-build is the possibility for early contractor involvement. Under this method, all of the team players—the designers, the contractors, the material suppliers and manufacturers—have an opportunity to be in continuous communication throughout the project. (Jackson 2004)

### Design and Build Integrated Approach

Figure 2-2:[ Design and Build Project Phase]



In ERA both type of delivery system has been popular because of the difference in the responsibility of the parties to the Contract Conditions and the type of the standard forms of contract used in this two-delivery system varies, therefore the administration of the contract slightly varies.

#### 2.2.3 Contract Management life cycle

The Contract Management Standard™ [CMSTM] (2019), states that Contracts have a distinct beginning and end, and the contract life cycle defines these parameters. The contract life cycle generally consists of three contract phases:

- Pre-Award,
- Award, and
- Post-Award.

From the three phases of the Contract in this research focus on the study of the contract management **on post award phase** is taken into consideration.

Once the award phase is completed, the post-award contract life cycle phase begins. This involves the **contract** management functions known as “contract administration” and “contract closeout.” The contract administration functions will vary greatly depending on the complexity of the contract. Both the buyer and seller are actively involved in contract administration to

ensure satisfactory performance and to bring the contract to a successful conclusion (CSTM 2019).

Buyer job tasks include:

- Addressing any issues arising during contract performance that might increase performance risk,
- Executing contract modifications,
- Monitoring compliance of contract terms,
- Making payment(s), and
- Closing out the contract.

Seller job tasks include:

- Contract performance,
- Invoicing,
- Engaging in subcontracting activities,
- Managing contract changes, and
- Bringing the contract to a successful conclusion.

There are two domains within the post-award phase:

- Perform Contract—the job tasks and competencies for this domain produce the contract performance.
- Close Contract—the job tasks and competency for this domain produce the closed contract (CMSTM 2019).

### **A. Perform Contract**

Perform Contract is the process of executing contract requirements, managing business relationships, ensuring quality, and managing changes. The value added by this process is in:

- Monitoring risk and assessing its impact on contract performance, and
- Ensuring compliance with (1) contractual terms and conditions and (2) contract technical requirements during contract performance up to contract closeout or termination

#### **I. Administer Contract**

- Confirming expectations,
- Maintaining communication channels,
- Processing contract documentation,
- Conducting post-award performance reviews, and
- Assessing contract performance.

The value added by this process is in managing risk and increasing the likelihood of satisfactory contract execution.

## II. Ensure Quality

Ensure Quality is the process of:

- Planning for contract performance delivery and monitoring, and
- Inspecting and accepting contract performance.

The value added by this process is ensuring the delivered good or service meets the specifications, terms, and conditions of the contract.

## III. Manage Subcontracts

Manage Subcontracts is the management of contracts in support of the prime contract. The value added by this process is in having a point-of-contact responsible for:

- Subcontract award,
- Technical and financial performance,
- Monitoring performance, and
- Payment to the subcontractors and suppliers for the work accomplished under subcontract terms.

## IV. Manage Changes

Manage Changes is the process of:

- Initiating, considering, negotiating, and issuing contract modifications; and
- Maintaining configuration control of the contract and subsequent contract performance.

The value added by this process is in allowing flexibility in making necessary contract changes while protecting the integrity of the contract.

## **B. Close the Contract**

The Close Contract domain is the domain of both the buyer and seller. It is the process of:

- Verifying all the requirements of the contract are satisfied,
- Settling unresolved matters, and
- Reconciling the contract to make final payment.

The value added by this process is in determining that the buyer and seller contract obligations have all been satisfied.

Close out Contract is the process of ensuring:

- All performance has been accomplished,
- Final contractor performance has been evaluated,
- Final payment has been made, and
- The contract has been reconciled.

The value added by this process is the completion, delivery, and acceptance of the contract requirement(s) in accordance with the terms and conditions of the contract. (CMSTM 2019)

#### 2.2.4 Contract Administration

The contract is the central element of every project activity. Contract management is becoming an integral part of project management, and business in general. Many commercial and project managers are more and more facing contract management issues. For projects of all types different contracts will be structured, negotiated, concluded and fulfilled. On the one side, we deal with the management of contractual relationships, on the other with the contracts and their management. (Contract management Guide, Republic of South Africa 2010)

Jackson (2004) also reinforced that Contract administration is all about managing the business details and relationships. When you consider all of the General Conditions, Supplemental Conditions, and specifications associated with the contract, you can understand what a challenge this is. Every statement and every clause in the contract set forth rules, regulations, and procedures for every aspect of the construction process. Nothing goes forward without some paperwork leading the way: written requests for information, change orders, submittal logs, shop drawings, pay requests, lien waivers, progress reports, and on and on. Staying on top of it all is a huge task and a critical one.

However, Nicholas and Steyn (2008) have provided a more elaborate discussion as contract administration is the project control that includes the ongoing comparison of project activities,

changes and accomplishments to requirements as stipulated in the contract, as well as invoicing the customer and the payment of bills. Ensuring commitments of the developer/ Contractor and the Customer as specified in the contract are met is the function of Contract administration.

On reviewing of the various authors, it is vividly clear that contract management has paramount impact on the overall success of the project in particular and the business in general. It is about how we manage the project in hand as pre the requirement of the Contract set and agreed during the formulation of the contract.

Jackson (2004) states that it is virtually impossible for one person to accomplish the job; support from the main office and the job site is required. Although one person may be the contract administrator, it takes the efforts of the entire project team to accomplish the task. From the notice to proceed to the Certificate of Completion, every notification, clarification, correction, approval, request, change, letter, e-mail, phone call, and administrative transaction must be tracked. Without proper attention to the contract details, the whole job could end up in one big lawsuit. No matter how good your concrete finishers or carpenters might be, you can't really fulfill the requirements of the project without strong contract administration.

In contrary to Jackson, Nicholas and Steyn (2008) discusses that project manager is the one who is responsible to administer the contract. However, it is clear that even though project managers are the first to deal with the various contractual issues, it requires a combined effort, understanding and flexibility to make the contract administration effective and efficient.

Before getting started with contract management of projects, there are several considerations to be made. The most important consideration is resource allocation. For a contract management project, as for any project, it is essential to have top management commitment on resources, goals, and schedule. Another important step is the nomination of project manager for contract management. Naturally, the goals and the schedule should be in line with the resources as well as the other way around. Once these basic preparations have been done, the project is set to get started. (HMSO, 2002)

All contracts are predicated on the need to obtain management commitment and approval at the appropriate level. This involves the formulation of a sound business case aligned to the organization's corporate and functional strategies. The business case sets out the policy, business and contract objectives and the issues that affect the decision and the investment. It should seek

to establish that the proposed contract will meet the need that it is achievable and affordable, and it should address the following issues: (Aberdeen Group, 2004)

There is need to assemble heterogeneous team in skills and a homogeneous team in corporation and team work. This is a major contracts management challenge in most of the organization most especially when it come to the implementation of the contracts. The need to assemble a team to manage a contractual procurement programme will be determined not only by the scale, nature, complexity and significance of the procurement and the necessary skills and experience but also by the extent to which it is considered appropriate, beneficial or a requirement to comply with organizational policy to involve stakeholders in the project. In addition to the need to identify the necessary technical skills, knowledge and experience with the appropriate level of authority required of the members of the team, the importance of the ability of team members to work together effectively and the significance of the role of the project leader should be recognized. [Singleton & Burnett, 1997]

From experience and the observation on projects it is evident that as discussed by (Jackson 2004) even though the primary assignment of contract administration is given to the site personnel on the Contractor and the Consultant side, it is clear that other site personnel and the various professional from the head office involved in contract administration.

#### 2.2.4.1 The Contract Administration Function

Contract administration has to do with the management of the details and information presented in the General and Supplemental Conditions of the contract and at the preconstruction meeting. Sometimes this role is handled by an individual identified as a contract administrator and sometimes the function is handled by numerous individuals associated with the project team. For example, applications for payment are often handled by a contract administrator back at the main office, but requests for information and submittals are handled by field engineers located on the job site. The need for a clear and accurate paper trail in construction is paramount, and the individuals charged with the contract administration duties must be particularly dedicated to the chore if the job is to move along smoothly. Poor performance here can be devastating. For example, inaccurate payment applications or delayed information attainment will cause havoc with the entire construction process. The work flow will suffer and affect both the schedule and the budget. That of course puts the entire project at risk. So, you can see how important the

contract administration function is to the overall project success even though it has very little to do with the actual bricks and sticks of building. (Jackson 2004)

Keeping up with all of the paperwork and red tape of the contract is a real challenge, and it cannot be taken lightly. Poor contract administration procedures are one of the main reasons that projects get into trouble. And if the project should go to court, the party with the most organized managerial procedures will win the majority of the time. The contractor must train all of his management personnel in good administrative practices. (Jackson 2004)

Contract life cycle management “is the process of systematically and efficiently managing contract creation, execution and analysis for maximizing operational and financial performance and minimizing risk”. Contract management is based on the following service modules and can be individually supplemented: commencement of contract negotiations, contract drafting, contract negotiations and contract implementation. Within the framework of the commencement of contract negotiations the essential information for the contract will be structured, analyzed and appraised, taking into account the suitable choice of business operating mode. We specify the necessary services and participate in the selection of your potential contractual partner. (Contract Life-Cycle Management – open Source CM, 2012)

#### 2.2.4.2 Monitoring Contractual Compliance

Contract drafting covers the configuration of the contractual relationship. In terms of risk distribution, the contract- relevant factors will be analyzed and appraised. Contract negotiation should lead to the conclusion of a contract with a potential partner. During contract implementation, there has to be monitoring of the fulfillment of the contract from the technical, timetabling, manning or financial perspective and implementation of the necessary measures. In this way there is accomplishment of on targeted compliance with the agreements and obligations “there in” the contract. (Contract Life-Cycle Management – open Source CM, 2012)

Developing a contract management plan during pre-contract award stages, it is normal for time to be devoted to the preparation of the business case, drafting specifications and tender documents selecting potential suppliers, and so on. However, time and effort must also be spent on determining how the contract will work once it has been awarded. The importance of contract management has already been mentioned and it is vital that a contract management plan is drawn

up in advance of contract award. This should set out how the obligations of all the parties should be carried out effectively and efficiently. (Handy, Fourth Edition 1993)

It can take the form of a conformance specification; where the organization sets out how the supplier should meet its needs or a performance or output-based specification where the supplier is given scope to propose solutions to an expected and known end result. Although the drawing up of specifications in the majority of large organizations is not the responsibility solely of the buyer, nevertheless it should be emphasized that the successful drafting of specifications is one of the most important responsibilities of a professional purchasing officer. Drafting specifications and requirements; a specification is a statement of needs and its purpose is to present to potential suppliers a clear, accurate and comprehensive statement of the organization's needs in order that they can propose solutions to those needs. (Lysons & Gillingham, Sixth Edition 2003)

Post-award management of longer term, high value and complex contracts can be categorized as service delivery management, relationship management and administration. The form and content of the contract document should therefore also be determined by the balance and significance required by each of these aspects of the post-award management. However; the foundations for effective and successful post-award contract management rely upon careful, comprehensive and thorough implementation of the upstream or pre-award activities. During the pre-award stages, the emphasis should be focused on why the contract is being established and on whether the supplier will be able to deliver in service and technical terms. However, careful consideration must be given to how the contract will work once it has been awarded. The organization's high-level requirements should be carefully researched so that there is clarity of purpose from the outset. This will help to ensure clarity in all aspects of the procurement process (Lysons & Gillingham, 2003).

#### 2.2.4.3 Contract Strategy

Post-award management of longer term, high value and complex contracts can be categorized as service delivery management, relationship management and administration. The form and content of the contract document should therefore also be determined by the balance and significance required by each of these aspects of the post-award management. However; the foundations for effective and successful post-award contract management rely upon careful,

comprehensive and thorough implementation of the upstream or pre-award activities. During the pre-award stages, the emphasis should be focused on why the contract is being established and on whether the supplier will be able to deliver in service and technical terms. However, careful consideration must be given to how the contract will work once it has been awarded. The organization's high-level requirements should be carefully researched so that there is clarity of purpose from the outset. This will help to ensure clarity in all aspects of the procurement process. Establishing the pre-qualification, qualification & tendering procedures; evaluating the suitability of potential suppliers to meet the commercial requirements of the organization is normally undertaken via a pre-qualification system. This is the most efficient method of assessing suitability to meet the required criteria and is carried out prior to inviting them to tender. In large, complex contracts of long duration it is important to determine firstly, whether or not the organization will adopt a pre-qualification system, determine the qualifications or criteria and concurrently decide the tendering procedures. (Handy, 1993)

#### 2.2.4.4 Project Control

Nicholas and Steyn (2008) states that as an aspect of project control but pertaining exclusively to contracted work, contract administration includes authorizing works to begin, monitoring work with respect to budget, schedules, and technical performance; ensure quality; controlling changes and sending or receiving payments for work completed. Further, it also discusses that when contract incorporates customer- specified measures or requirements for project monitoring and reporting, the project control system must incorporate the specified measures into the usual performance tracking and progress reporting system.

Measuring contract performance: Businesses need to know if their contractual obligations are being followed and deadlines are being met. Contract leakage is a real concern that can occur if individuals, obligated to act upon the detailed obligations in a contract, are unaware of the specifics of their agreement. While a manager may fully understand a contract's details at the time of execution, remembering obligations months later is another matter entirely. Without a structured way to identify contract events and tie them to a calendar or to reminders that prompt action, missed deadlines, potential penalties and missed incremental revenue opportunities can become the norm. (Aberdeen Group, 2004)

Managing scattered data: If data is contained in different locations, it can be difficult to locate and to associate one document to another. This can create problems if you need to review multiple documents pertaining to a certain contract (amendments), or review different versions of the same document, and they are not together. Even if documents are digitized, if they are in different environments they can be difficult to locate or to access. (Contract Life-Cycle Management – open Source CM, 2012)

However, the purpose of SLAs and setting service levels is to enable the customer to monitor and control the performance of the service received from the supplier against agreed standards. It should be understood that service levels should be agreed and benchmarked for both customers and suppliers and should be: established at a reasonable level; if they are set too they will attract additional charges from the supplier. There are advantages and disadvantages in using SLAs. Among the advantages are: (Harvey, Revised Edition, 1998)

1. The service providers and the customers are clearly identified
2. Attention is focused on what a service actually does as opposed to a belief

#### 2.2.4.5 Payment Process

During performance of the contract, the contract administration process must ensure that customers are invoiced for services and material specified in the contract, and that subcontractors and suppliers are paid. For simple projects, billing and payment tracking is done through the Contractor's accounts receivable system, for large, complex projects, it is handled through a dedicated billing and payments tracking system (Nicholas and Steyn, 2008).

#### 2.2.4.6 Management of change

Nicholas and Steyn (2008) discusses that contract management ensures that change requests for contracted work are assessed against the conditions stated in the contract, and that any necessary approval are secured before proceeding the work. It also assures that all necessary approval is secured before the contract is modified and changes are implemented.

In administering the contract as discussed by Nicholas and Steyn (2008), managing changes has a set of procedures on the contract and it has to be met otherwise it would be difficult to manage the budget and the time. It is also a tool to follow up the public money are well spent.

#### 2.2.4.7 Administration of Costing out

Developing contract exit strategy; a contract will conclude when both parties have satisfactorily fulfilled their responsibilities under the terms of the contract. This, for example, will occur when the goods or services have been supplied and payment made and/or at the end of a pre-agreed period of time. This situation, however, does not remove the need to develop a contract exit strategy as part of the process of risk identification and reduction, and reinforces the importance of establishing the foundations of sound contract management. It is important to identify the circumstances under which early contract exit may be required or indeed desired, may be when there is a major default by your organization; this may include contractual breaches or changed circumstances - market, political, economic, funding resulting in major procurement need changes, financial resulting in non-payment of supplier's invoices etc. (Handy,1993)

#### 2.2.5 Challenges of Contract Administration

Organizations in both the public and private sectors are facing increasing pressure to reduce costs and improve financial and operational performance. New regulatory requirements, globalization, increases in contract volumes and complexity have resulted in an increasing recognition of the importance and benefits of effective contract management. The growing recognition of the need to automate and improve contractual processes and satisfy increasing compliance and analytical needs has also led to an increase in the adoption of more formal and structured contract management procedures and an increase in the availability of software applications designed to address these needs (Contract Life-Cycle Management – open Source CM, 2012).

One of the challenges is often how to get started with contract management. The process of preparing and launching of contract management in an organization can take years. This kind of a process should be seen as an on-going multi-step process instead of a project that can be completed in less than a year. However, contract management development is beneficial and even crucial. The good news is that after each completed sub-project contract management results in cost savings and increased profits. As contract management concept is extended to the entire organization in its' widest and purest form it will be an essential competitive edge. (Contract Life-Cycle Management – open Source CM, 2012)

Today's business models are driving the complexity of contracts, their terms and conditions. Similarly, the number of contracts is rapidly increasing. The way contracts are managed must be

changed. Managing contracts manually and in an ad-hoc manner is resulting in higher risks and costs. Additionally, lack of clear executive ownership of contract management issues is one of the major reasons for operational weaknesses. (Contract Life- Cycle Management – open Source CM, 2012)

Tracking global contracts: Suppose your organization either has geographically dispersed offices or you conduct business internationally. A number of factors, ranging from differences in language and how words are interpreted, to unique business practices can complicate global contracts, making it difficult to ensure that sufficient understanding is established between parties. While today's contract negotiations rarely happen in person, global contracts almost never happen in person, making clear understanding essential. It can also be difficult to share data between parties on opposite ends of the earth. While email communications have become the standard means of communication for most companies, it does not prevent the wrong version of documents from being reviewed, nor does it adequately control or track contract review status or workflow, both essential to good contract management. (Aberdeen Group, 2004)

#### 2.2.6 Contract Management Success

It is worthwhile noting that contract management is successful if: (Singleton & Burnett, 1997)

1. The arrangements for service delivery continue to be satisfactory to both parties, and the expected business benefits and value for money are being realized
2. The expected business benefits and value for money are being achieved
3. The supplier is co-operative and responsive
4. The organization understands its obligations under the contract
5. There are no disputes
6. There are no surprises
7. A professional and objective debate over changes and issues arising can be had
8. Efficiencies are being realized.

Ronald (2014) in addition to these success conditions, it is worthwhile noting the foundations of successful contract management and the need for preparing a management plan:

1. The need for flexibility by the contracting parties, particularly in partnership agreements

2. A willingness to adapt the terms of the contract to reflect change and unforeseen problems.

Although the risk assessment process mentioned earlier may be carried out thoroughly and professionally, problems are still likely to arise during the contract period like;

### 2.3 Empirical Review of Related Literature

In reviewing of related literature on contract management, complete study could not be found, rather the various aspects of the contract management had been studied and the relevant issues are reviewed and presented herein under

#### 2.3.1 Work program

Abebe (2015) found out that contractors are not submitting the work program that is going to be used for monitoring of the progress of the project as per the time stipulated on the contract and the submitted program also has limitation on the choice of work programing methods, right of way requirement description, design of project logic, external environment factors, project calendar establishment and climatic condition. Generally, the program submitted are not adequate and attributing to the project delays and cost overrun.

#### 2.3.2 Payment Process

Payment is the life line of every contractor for performing the project effectively, Gizachew (2017) in his assessment found out that the delay in payment has a deterrent impact on the progress, cost and quality of the project.

#### 2.3.3 Variation

Variation are very common on the construction of the road project, Tewodros (2015) had found that variation works are resulting the time and cost overrun on projects, properly administering this varied work has paramount impact on the project. The same has been confirmed by Temegen (2015) that variation are common road construction project during implementation.

## **CHAPTER 3. RESEARCH DESIGN AND METHODOLOGY**

### **3.1 Introduction**

This section describes all the procedures undertaken to achieve the objectives of the research conducted. The procedures adopted including the collection of all relevant data, where those data are obtained and how they are obtained discussed in the ensuing section.

In addition, data and information sources, research instruments, sample size and method of analysis are presented. The succeeding sub section provides a general description on the research strategy adopted while conducting the research, further the justification of the methodology adopted also presented.

### **3.2 Research Paradigm, and Approach**

#### **3.2.1 Research Setting**

The research attempted to assess the contract management practices on the federal road construction projects. The Federal road projects are road projects that are administered by the Federal government and it mainly comprises of the major road projects throughout the country.

#### **3.2.2 Organizational context**

Following the shift from a command-based economy to a market oriented one in 1991, ERA was reestablished by proclamation No.63/1993 with a view providing a strong administration under the leadership of a board. As part of its reform, the government assigned administration of rural roads to the regional self-governments and main roads to ERA as part of the Federal Government Responsibility (ERA n.d). However, after eight years of operation, ERA was again reestablished by proclamation No. 80/1997 with the objective to develop and administer highways, and to ensure the standard of road construction. With the establishment of the new cabinet of minister in October 2001, a Ministry of Infrastructure and later on Ministry of Urban Development has been formed with the responsibility of developing the infrastructure of the nation. ERA, which is one of the organizations under the Ministry formulating long and short-term plans and programs of road construction, design, maintenance of truck and major link roads, as well as administration of contracts (ERA n.d).

Currently, the main responsibilities of ERA are network planning; management of contract projects and force account operations. The long-term objective is to focus on policy, planning and contract administration and to pull out gradually from direct operational works (ERA n.d).

The head office of the Ethiopian Roads Authority is located near Mexico square on Ras Abebe Aragay St. in front of Wabesheble hotel, in Addis Ababa, Ethiopia.

### 3.2.3 Research Approach

The research approaches used in this project work are categorized in two types, which are: quantitative research and qualitative research. The decision in the choice of the research type is mainly depends on the type of study and availability of the information required for the study (Naoum, 1998) .

Quantitative research is an objective measurement of a problem based on a theory composed of variables that can be measured in numbers; while qualitative research emphasizes meanings, experiences and descriptions to subjectively evaluate the opinion, view or perception of respondents towards a particular issue. For this research qualitative research type is implemented, in view of the fact that it is possible to get adequate information from research questions that are related to the respondent's experience in areas of Contract management.

### 3.2.4 Research Design/type

The research is descriptive research. It attempted to assess the contract management practice on the federal road projects and measures current practice in terms of submission, approval and implementation using questioner.

The researcher used descriptive research type because descriptive research helps to describe the Contract Management practice well accurately and systematically. On road construction industry in Ethiopia the Contract Management is one of the critical issues to be addressed for the success of the project, however, problems regarding the matter is observed and this research attempted to assess the current practice, the challenges in contract administration and characteristics of the good contract management, therefore, the researcher used descriptive research design.

## 3.3 Research Population and Sampling Design

### 3.3.1 Target Population

The target population in this research is parties that involved in the federal road construction like the Employer (ERA), the Consultants (both local and foreign) and Contractors (both local and foreign), the target of the research population are all those professionals working in one of these parties. However, the financier for federal road projects like the World Bank, African Development Bank, etc... working with ERA is neglected intentionally since finding professionals to respond for the research question from these organization is difficult, costly and time taking, in addition, the research focus on the contract management practices in Federal Road Projects and their involvement on project's contract management is found to be low.

According to ERA, currently, there are a total of 36 and 33 domestic and foreign contractors and there are 36 classes III and above local consultants and 15 International Consultants actively working with ERA. From the Employer side we have only ERA who is administering the construction of the federal road projects, in ERA project's are administered with 5 contract management directorate and they have 15 team leaders. All these three group constitute the target population for the research.

Generally, the sampling unit of this study is domestic and foreign Contractors and Consultants who have projects with ERA and the professionals who are working in regional directorates in Ethiopian Roads Authorities (ERA).

### 3.3.2 Sampling Frame

This research is conducted for assessing the contract management practice on federal road construction projects, thus, data will be collected from the Employer, Contractors and Consultants, who participated on the construction of the federal road projects.

As discussed in the literature review, the contract administration practice is assessed in the implementation stage of the contract life cycle, for the same the progress of the project has to be enough to show all kinds of administration of the contract starting from the commencement of the project up to the closing of the project. The Ethiopian Public Procurement Directive (2010) states that the project will be taken as complete for bidding purpose if it is completed 70%, for this research, therefore, projects that are 70 % and above is taken for the study in order to address all the contract cycle in the implementation phase of the project.

From the total population based on the above criteria a total of 16 local contractors and 8 International Contractors, and 17 local consultants and 8 international consultants currently managing projects that reach 70% of the progress are selected. In addition, in ERA on all regions they have projects its projects are above 70 therefore, all the 15 team leaders are considered.

Totally, 64 questioners have been distributed to the target group selected as discussed above.

### 3.3.3 Sampling Technique

According to Saunders (2007), sampling techniques provide a range of methods that enable a researcher to reduce the amount of data you need to collect by considering only data from a subgroup rather than all possible cases or elements. The study used non-probability sampling techniques. The researcher selected purposively domestic and foreign Contractors who have projects with ERA whose progress of the project is above 70%, Domestic and foreign Consultants who are working with ERA whose progress of the project is also above 70% and Clients of ERA regional directorates, team leaders and professionals who are working in contract administration stream are selected.

The researcher first categorizes the sectors based on their origin which means domestic or foreign and then based on their progress of the project. After dividing the sectors, the researcher considered all of those entities their project is above 70%. In addition, the researcher purposively considered 15 respondents from professional's Regional directorates team leaders.

For this study, therefore, the researcher considered a total of 64 respondents to obtain a reliable result.

### 3.3.4 Sample Size

Since the target population is small no formula is used, from the target population the following sample size is determined, in fact, all the population is taken for the research and the representation of 100%.

- There are 36 domestic and 33 foreign Contractors, however, only 16 domestic and 8 foreign contractors have projects above 70% and thus a total of 24 questionnaire distributed.
- There are 36 Domestic and 15 foreign Consultants who are actively working with ERA, however 14 domestic and 7 foreign Consultant have active projects

whose progress of the project is above 70%, and thus a total of 21 questionnaire distributed.

- From the Employer ERA is only one, however 15 questionnaires will be distributed to the professional's Regional directorates team leaders.

### 3.4 Data Collection

The primary function of the survey and desk study is to collect information that can be analyzed, and inference is made to produce conclusion about the contract management practice in Federal road construction projects in Ethiopia. For the data collation both the primary and secondary data is considered and analyzed.

#### 3.4.1 Primary Source

The source of the primary data is a form of questionnaire, self-designed questionnaire is used to gather adequate data from Implementing Agency (ERA), consultants and contractors, who participating in the federal road construction projects.

#### 3.4.2 Secondary Source

Secondary data which involves information from published text such as academics periodicals, research journals, government publications, dictionaries, past dissertations and internet resources are used to compliment the primary data and reach a sound conclusion.

### 3.5 Data Collection Methodology

Questionnaire is distributed personally and via email to the selected parties involved in federal road construction projects.

#### 3.5.1 Data Collection Instrument

Questionnaire- The variables that are identified from a literature review and for the fact that the topic area is very wide that need to be structured, and at the same time respondents are also required to be flexible in responding some of the questions, semi-structured questionnaire are also employed in the study. The questionnaire is carefully designed in light of getting high response rate from participants. In this respect, preliminary questionnaire was distributed to ten selected respondents and tested. In due course, the questionnaire is modified with incorporating valuable comments obtained from the preliminary test and the final questionnaire is designed.

The alternative answers for the structured part of the questionnaire is developed based on Likert's-scale of five ordinal measures of agreement towards each statement (from 1 to 5) [Strongly disagree, Disagree, Neutral, Agree and Strongly Agree].

A Likert scale is, simply, a statement in which the respondent is asked to evaluate according to any kind of subjective or objective criteria and get opinion, or experience of respondents. In this technique, generally, the level of agreement or disagreement of respondents is measured. The reasons for adopting this simple scale is to provide simplicity for the respondent to answer and make evaluation of collected data easier. The questionnaire was sent to reputable professionals selected from the parties in road construction.

### 3.6 Data Analysis Methods

In the analysis, the "Mean Score" or "Average Index" method is adopted to establish the relative weight of different factors in association with Contract Management. The analysis will rank the factors based on the frequency analysis and mean score/average index. This index was calculated as follows (Abd Majid and McCaffer, 1997).

$$MS = \frac{\sum (f \times \mu)}{N}$$

Where:

MS – Mean Score

f – Frequency of responses for each score

μ – Weighting given to each factor by respondents (1 to 5)

N – Total number of responses concerning each factor

Whereby the application of Average Index in questionnaire for instance would be:

μ1 = 1, frequency of "Strongly Disagree" response = Very low degree of considerations

μ 2 = 2, frequency of "Disagree" response = Low degree of considerations

μ 3 = 3, frequency of "Neutral" response = Neutral considerations

μ 4 = 4, frequency of "Agree" response = High degree of considerations

μ 5 = 5, frequency of "Strongly Agree" response = Very high degree of consideration

### 3.7 Scale and Reliability

These average indexes could be further interpreted back to reflect the respondents, used discrete scale converted to a continuous index, which then can be split into discrete categories.

- Strongly Disagree ( $1.00 \leq \text{Mean Score} < 1.80$ )
- Disagree ( $1.90 \leq \text{Mean Score} < 2.60$ )
- Neutral ( $2.70 \leq \text{Mean Score} < 3.40$ )
- Agree ( $3.50 \leq \text{Mean Score} < 4.20$ )
- Strongly Agree ( $4.30 \leq \text{Mean Score} < 5.00$ )

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings (Saunders et al., 2007). The data reliability test is measured by using Cronbach's Alpha.

Cronbach's Alphawas also calculated as part of the reliability test to assess how valid the results were and should produce similar generalized results if the sample size were increase (Field, 2006). The Alpha value is ranges from a maximum of 1.0 for a perfect score to minimum of zero, good measure of the alpha should be 0.70 or higher (Neuman, 2007). According to William and Barry (2010) scales exhibiting a coefficient alpha between 0.80 and 0.96 are considered to have very good reliability, between 0.70 and 0.80 are considered to have good reliability, and alpha value between 0.60 and 0.70 indicates fair reliability and when the coefficient alpha is below 0.60, the scale has poor reliability. Accordingly, the Cronbach's Alpha values of the survey indicate good reliability and the result are presented in table 3.1 below.

Table 3-1: Cronbach Alpha Value

S. No	Variables	Cronbach's Alpha Value	Number of Items
1.	Monitoring and Evaluation	0.741	5
2.	Claim	0.715	5
3.	Dispute	0.700	7
4.	Payment Process Administration	0.691	7
5.	Management of Change	0.710	7
6.	Contract Closing out	0.815	7
7.	Challenges and Problems in Contract Administration	0.706	7
8.	<b>Advantage of Proper Contract Management</b>	0.761	6

As presented in the above table, the Cronbach's Alpha range values for the variables are between 0.700 to 0.841. Therefore, all variables are acceptable for further analysis.

### 3.8 Validity

Kohtari (2004) stated that validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. In order to ensure the validity, the researcher after drafting the instrument request the comment from the advisor and experts working on the contract administration, based on their valuable comment the question was modified to cover all the area of contract management in road projects.

### 3.9 Ethical Consideration

Sanders, M., Lewis, P. and Thornhill, A. (2009) describe ethics in the context of research, as the appropriateness of your behavior in relation to the rights of those who become the subject of your work, or are affected by it.

On the questioner proper ethical consideration has been disclosed to the respondents and they become aware of the confidentiality of their response and identity prior responding to the questioners.

## CHAPTER 4. RESULTS AND DISCUSSION

### 4.1 Introduction

In this chapter the result found where analyzed and discussed in relation with the objective of the study, in order to assess the contract management practice in Ethiopian Federal Road projects, various aspects of the Contract management process namely Contractual Compliances, Minorings and evaluation, claims and dispute administration, Payment process administration, Management of change Contract closing out and challenges and problems were analyzed and discussed.

The presentation starts with the response rate, and followed by the background information. Later, findings are presented and discussed.

The questionnaire was distributed to the parties involved in the federal road construction and their progress of the projects are above 70 % to fully assess the practices of the contract administration during the implementation phase. A total of 60 questionnaires were sent to a selected sample of respondents, and the composition of the respondent is as follows

- 16 domestic and 8 foreign contractors have projects above 70% and thus a total of 24 questionnaire distributed.
- 14 domestic and 7 foreign Consultant have active projects whose progress of the project is above 70%, and thus a total of 21 questionnaire distributed.
- 15 questionnaires were distributed to the professional's working Regional directorates of ERA, namely team leaders.

### 4.2 General

#### 4.2.1 Response rate and Demographic Data

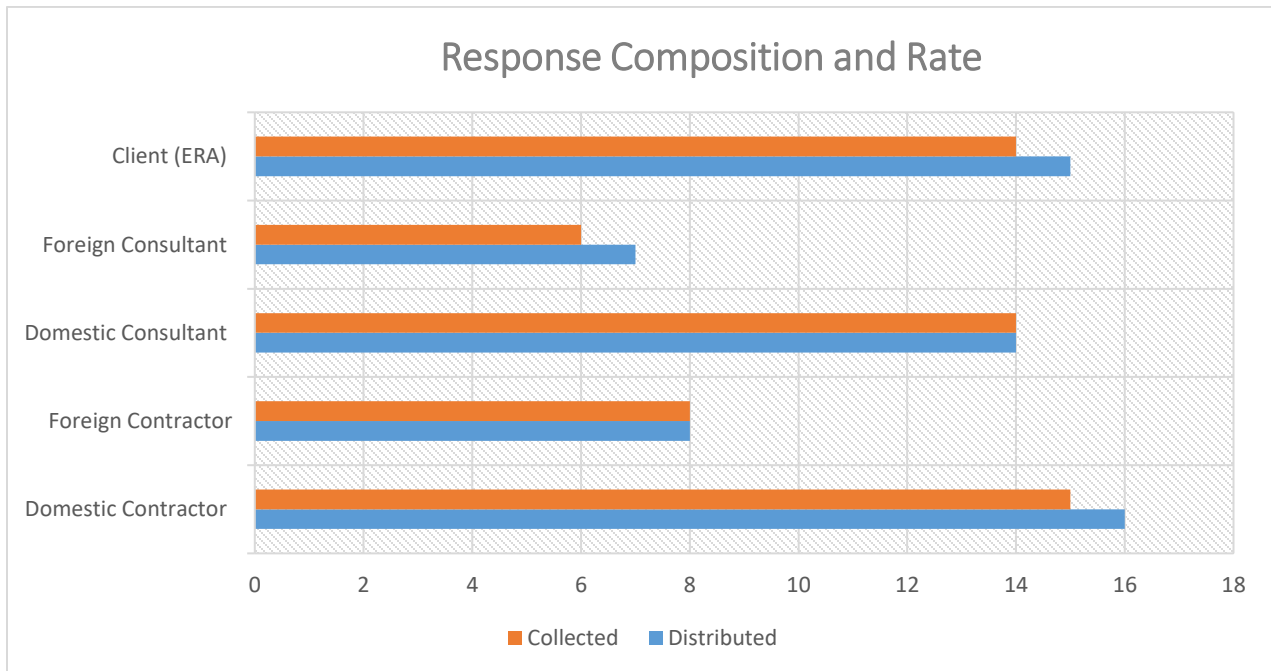
In order to conduct this research a questioner is prepared and distributed. A total of 60 questioners were distributed to domestic and foreign contractors' and consultants' top management officials and contract administration officers of the Employer (Ethiopian Roads Authority). The questionnaires that were distributed to foreign contractors and domestic consultants were properly responded and fully returned, but out of 15 questionnaires distributed to ERA 14 are fully responded whereas, out of a total of 16 questioners which are given out to the domestic contractors, 15 responses were managed to be collected. In addition, from foreign consultants one questionnaire was not returned. So, the analysis is done on 95% response rate.

The total response rate is found to be 95.00%, but for each group of the respondent, the response rate is presented as shown in the table herein under.

Table 4-1[ Response Composition and Rate]

No	Group	Number of Entities		Total questionnaire		Response rate (%)
		Actively working with ERA	Progress Above 70%	Distributed	Collected	
1	Domestic Contractor	36	16	16	15	93.8
	Foreign Contractor	33	8	8	8	100.0
2	Domestic Consultant	36	14	14	14	100.0
	Foreign Consultant	15	7	7	6	85.7
3	Client (ERA)	15	15	15	14	93.3
	<b>Total</b>	<b>135</b>	<b>60</b>	<b>60</b>	<b>57</b>	<b>95.0</b>

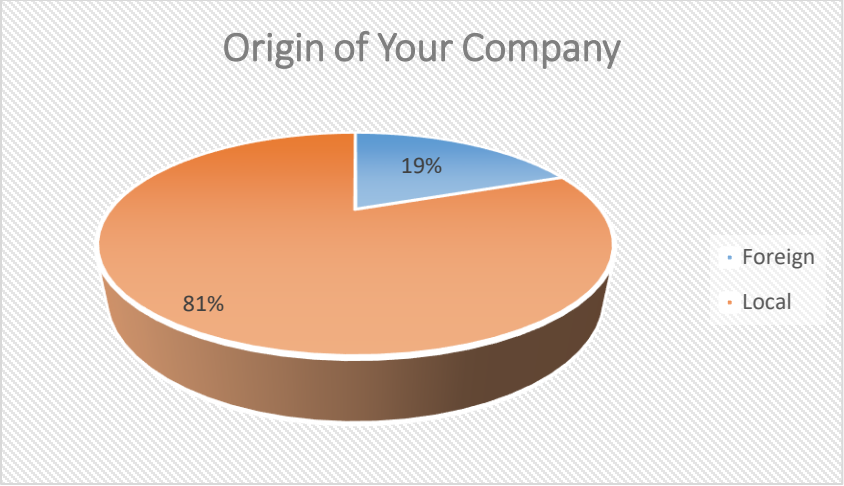
Figure 4-1:[Response Rate and Composition]



#### 4.2.2 Origin of the Entities

In terms of the origin of the entities, out of the total 57 respondents, the collected data shows that 81% of the respondent are Domestic entities and 19% of the respondents are foreign based.

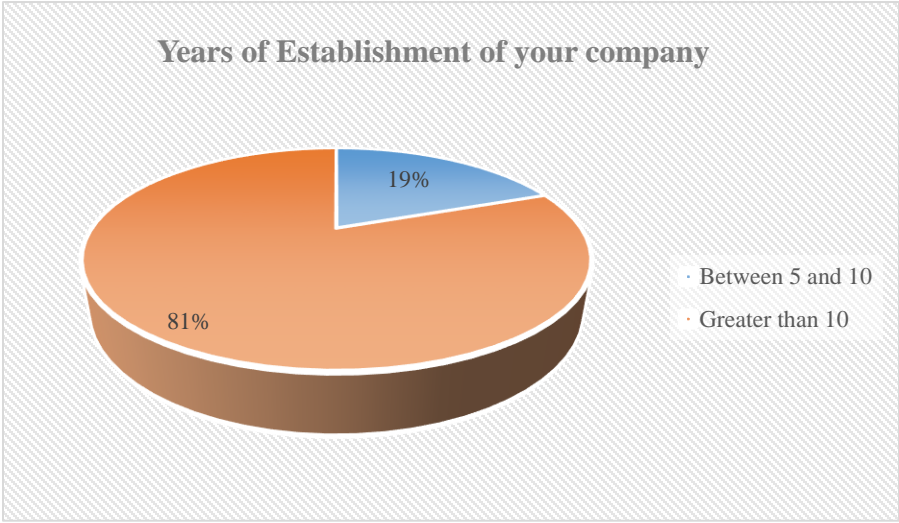
Figure 4-2:[ Origin of Company of Respondent]



4.2.3 Respondents’ Organization Years Establishment

Out of the total 57 respondents, the collected shows that 19% of the respondent are working in organization that was established between 5 and 10 years, and the remaining 81% of the respondents are working in organization established more than 10 years ago. And none of the respondents were found in the range between 5 to 10 years. It means that most of the companies working in federal road projects are well experienced.

Figure 4-3:[ Years of Organization Establishment of Respondent]

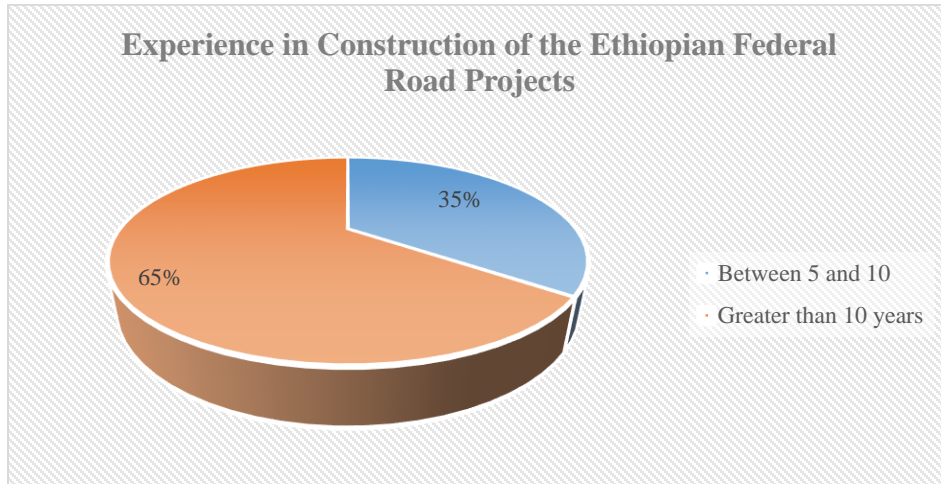


4.2.4 Respondents’ Organization Experience in Federal Road Project

Out of 57 respondents, the collected data shows that 35% of the respondents have experience between 5 and 10 years, and 65% of the respondents have more than 10 years of experience in

federal road construction projects. This shows that the respondents' company have ample experience in construction of the federal road projects.

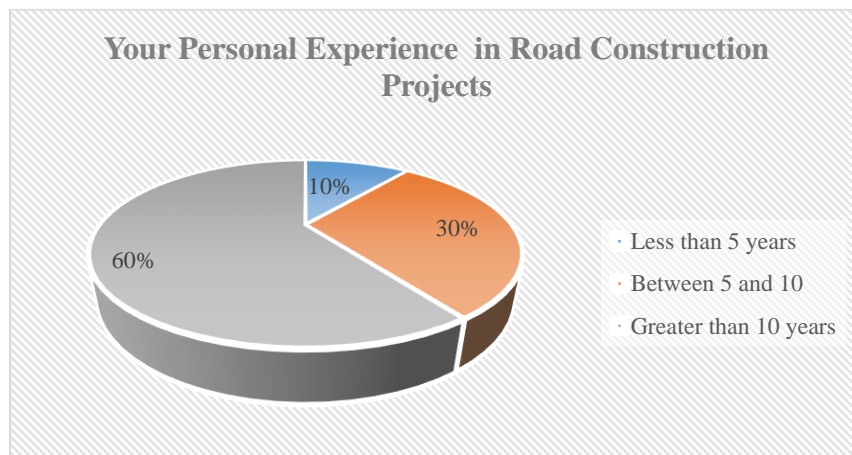
Figure 4-4:[ Years of Experience in Federal Road Project]



#### 4.2.5 Respondents' Personal Experience in Road Construction Project

Out of the 57 respondents, the collected data depicts that the respondents who have experience less than 5 years are only 10%, 5 to 10 years of experience are 30 % and 60% of the respondents have more than 10 years' experience. It shows that the respondents are well experienced.

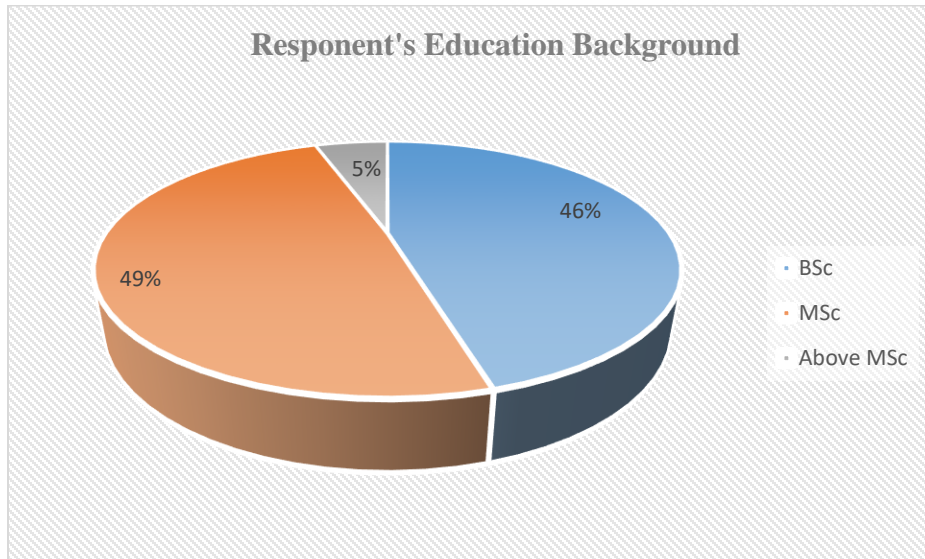
Figure 4-5:[Personal Experience in Road Construction Project]



#### 4.2.6 Respondents' Education Background

Out of 57 respondents, only 5% of them have educational background above Masters, 49% of the respondents have Master's Degree and 46% of the respondents are BSc holders.

Figure 4-6:[Educational Background]



### 4.3 Contractual Compliances

After signing of the contract, all parties to the contract are required to comply with the requirements of the contract, under the contractual compliances securities, work program and reports submission as per the contract requirements and their content has been identified and studied.

In order to assess the compliance of the contract requirements respondents were asked to reflect their view on the compliance of the contractual requirements of the parties to the contract on their respective projects, the result found is presented herein under.

#### 4.3.1 Securities and Insurances

The result presented shows that the respondents believes that the advance guarantee, performance security, and CAR insurance policies are submitted as per the requirement of the contract. However, most of the respondents believes that workmen insurance policy isn't submitted as per the requirement of the contract. In addition, the insurances and guarantees are not renewed on time when required prior to its expiry.

Based on the five conditions, most of the respondent believes that the contractual issues regarding the insurance and bank guaranties are complied with regard to the submission.

Table 4-2:[Securities and Insurances]

No.	Questions	Scale	Frequency	Percent
1	Is Advance guarantee is submitted as per the requirement of the contract	Yes	44	77.2
		No	13	22.8
		Total	57	100
2	Is performance security is submitted as per the requirement of the contract	Yes	57	100
		No	0	0
		Total	57	100
3	Is CAR insurance is submitted as per the requirement of the contract	Yes	38	66.7
		No	19	33.3
		Total	57	100
4	Is Workmen insurance is submitted as per the requirement of the contract	Yes	20	35.1
		No	37	64.9
		Total	57	100
5	Does the contractor renew the insurances and guarantees on time or prior to its expiry	Yes	21	36.8
		No	36	63.2
		Total	57	100

#### 4.3.2 Work Program

The respondents believe that the work program is not provided as per the requirement of the contract and the content of the submission and the revision of the work program is not also done as per the requirement of the contract. Abebe (2015), also found that work program is not submitted on time and the contents are not found to be satisfactory.

Table 4-3:[Work Program]

No.	Questions	Scale	Frequency	Percent
1	Is the Contractor providing the master work program as per the requirement of the contract	Yes	43	75.4
		No	14	24.6
		Total	57	100
2	Is the content of the submitted program found to be acceptable	Yes	19	33.33
		No	38	66.67
		Total	57	100
3	Depending on the progress of the project, is the contractor updated the work program	Yes	14	24.56
		No	43	75.44
		Total	57	100
4	Does the Contractor revise the program regularly as required under the contract	Yes	20	35.1
		No	37	64.9
		Total	57	100
5	Does the Contractor submit supplementary program when requested	Yes	13	22.81
		No	44	77.19

No.	Questions	Scale	Frequency	Percent
		Total	57	100

### 4.3.3 Reports

In due performance of the project, the Contractor is required to submit various reports and the respondents were asked and reflected their observation regarding the submission of the reports. The result shows that the respondent believes that only the quality control manual is submitted properly on time, however all other reports like mobilization report, Environmental, Health and safety report and monthly report are not submitted properly on time.

Table 4-4:[Reports]

No.	Questions	Scale	Frequency	Percent
1	Does the Contractor submit mobilization of resources report properly	Yes	25	43.9
		No	32	56.1
		Total	57	100
2	Does the Contractor submit the Quality Control manual	Yes	51	89.5
		No	6	10.5
		Total	57	100
3	Does the Contractor Submit the Environmental, Health and Safety Report on time	Yes	21	36.8
		No	36	63.2
		Total	57	100
4	Does the Contractor report whenever accident happened on the project	Yes	11	19.3
		No	46	80.7
		Total	57	100
5	Dose the contractor submit monthly progress report on time	Yes	25	43.9
		No	32	56.1
		Total	57	100

### 4.4 Monitoring and Evaluation

Regarding monitoring and evaluation of the progress of the project most of the respondent as shown below believes that progress of the project is not evaluated regularly and the consultant's evaluation of the progress of the project is not believed to be fair and unbiased.

Table 4-5:[Monitoring and Evaluation]

I/No	Description	Mean Score	Rank	Attribute
1	Instruction to correct the progress of the project as per the condition of the contract is issued by the Consultant regularly.	2.77	2	N
2	Consultant regularly evaluate progress of the project	2.44	3	D
3	Advise on how to improve the progress of the project is issued by the	3.21	1	N

I/No	Description	Mean Score	Rank	Attribute
	Consultant as required			
4	Client regularly evaluate Contractor's progress	1.93	5	D
5	Consultant's evaluation of the progress of the project is usually fair and unbiased	2.16	4	D

#### 4.5 Claim and Dispute Administration

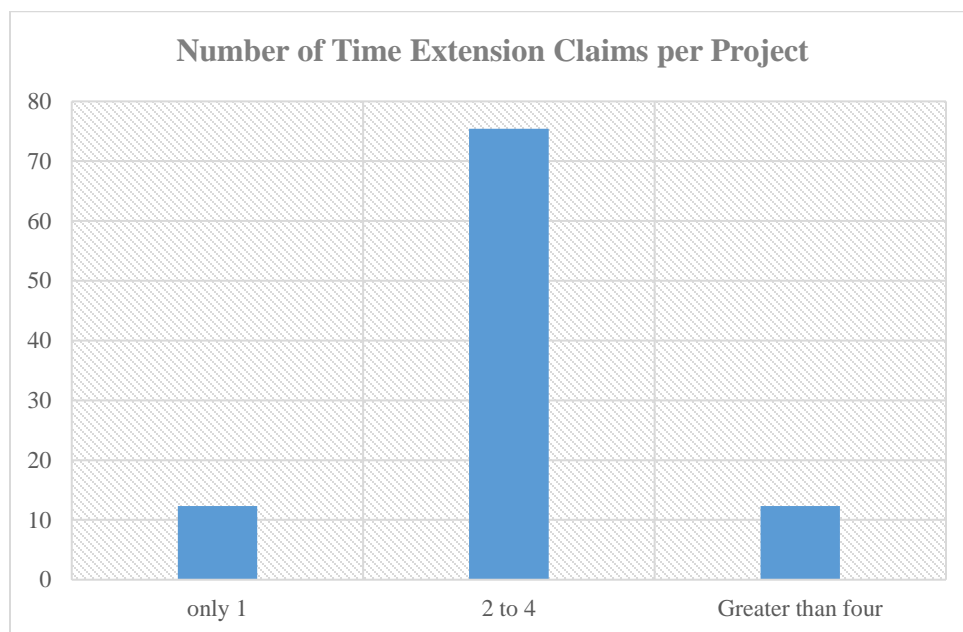
##### 4.5.1 Time Extension

As shown below on all projects' the Contractor submitted time extension claims and the projects the number of time extension claims per project is about 2 to 4.

Table 4-6:[Time Extension]

		Frequency	Percent	Valid Percent	Cumulative Percent
Is the Contractor submitted Time Extension Claim	Yes	57	100	100	100

Figure 4-7 [Number of Claims Per Projects]



##### 4.5.2 Cost Claims

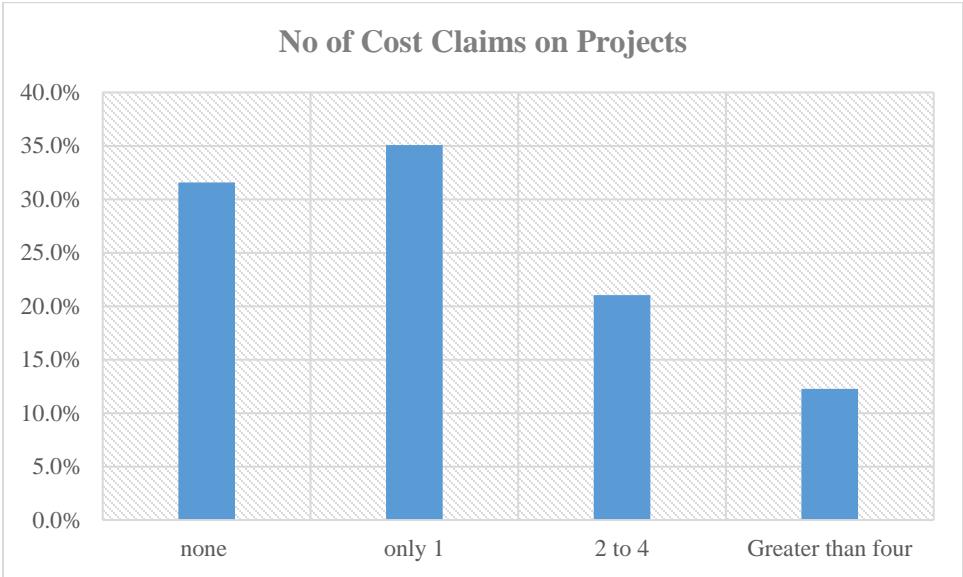
Relatively cost claims are less usual than the time extension claims on projects, as shown below 68 % of the respondent replied that there was a cost claim during performance of the project but 31.6% of the respondent didn't observe Cost claims in due performance of the project.

Table 4-7:[Cost Claim]

		Frequency	Percent	Valid Percent	Cumulative Percent
Is the Contractor submitted Cost Claim	Yes	39	68.4	68.4	68.4
	No	18	31.6	31.6	100
	Total	57	100	100	

As shown below the number of cost claims on project is very minimum, usually only one cost claim is submitted pre-project or no claim is submitted.

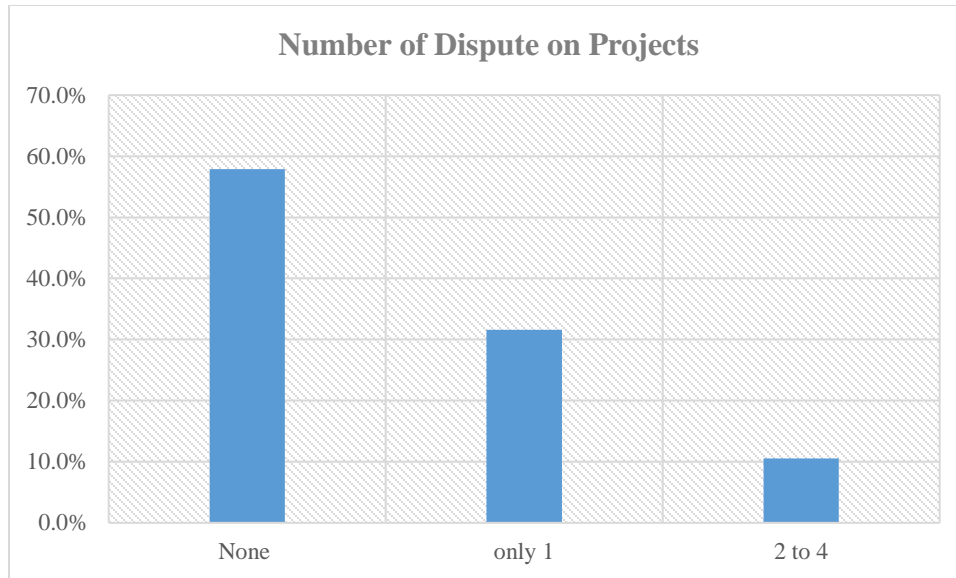
Figure 4-8: [Number of Cost Claims]



#### 4.5.3 Dispute on Project

The result collected from the respondent as shown herein under shows that dispute between the Employer and the Contractor is not common in federal road construction projects in Ethiopia.

Figure 4-9: [Number of Dispute]



#### 4.5.4 Administration of Claims and Disputes

In administration of claims, the respondents feel that claim is not administered well in various parameters, however during determination of the claim the respondent feels that consultation between parties is made prior making determination.

Table 4-8:[Claims]

I/No	Description	Mean Score	Rank	Attribute
1	Contractor Issue Notice to Claim on time whenever Delaying event arises on site as per the Contract requirement	2.32	3	D
2	The Consultant advise the Contractor to keep the Contemporary record when notice is served by the Contractor	2.05	7	D
3	The Content of the Notice of delay the contractor submit usually found to be acceptable	2.54	2	D
4	The Contractor submit the Detail particular within the time period specified on the Contract	2.19	5	D
5	Engineer give determination for the claim within a reasonable time	2.28	4	D
6	Consultation of the parties to the Contract is made prior making determination	3.60	1	A
7	Usually Engineer acts impartial when giving determination	2.14	6	D

The result from the respondent shows that dispute review expert is not assigned on the project on time and notice to dispute is not also filed on time. However, respondent feels that dispute is common on project and dispute experts give their ruling on time. Regarding the agreement on the decision and the impartiality of the dispute review expert, the respondents have neutral view.

Respondents agree that when parties didn't agree with the DRE rulings give notice for arbitration to take their case to arbitration on time.

Table 4-9:[Dispute]

I/No	Description	Mean Score	Rank	Attribute
1	Dispute Review expert assigned for the Project as per the Contract requirement on time	2.60	6	D
2	Notice for dispute issued on time	2.32	7	D
3	Dispute on the project is common	3.40	3	A
4	Dispute review expert usually give their ruling on time	3.77	1	A
5	Usually one of the parties Either the Employer or the Contractor disagree with the decision of the Dispute Review expert	3.32	4	N
6	Usually Dispute Review Expert acts impartial when giving rulings	2.86	5	N
7	when either of the parties didn't agree with the DRE decision give notice to arbitration on time	3.61	2	A

#### 4.6 Payment Process Administration

The result shows that the Contractor is not submitting monthly statements on time and the content of their submission is not also found acceptable. On the flip side the most of the respondents felt that the Engineer is not certifying the Contractor's payment on time. Regarding effecting the payment on the Employer side, the collected data shows that the Employer is making payment partially on time.

The respondent believes that contractors reduce the rate of progress of the work when payment is delayed beyond the time stipulated on the contract and whenever there is delay beyond the time limited stated in the Contract, contractors usually suspend work.

Table 4-10:[Payment Process]

I/No	Description	Mean Score	Rank	Attribute
1	Contractor properly submit monthly statement on time	2.39	6	D
2	Contractor's monthly statement content is found to be acceptable	2.51	5	D
3	The Engineer certify the payment within the time frame stipulated on the Contract	2.05	7	D
4	The Employer pay the Contractor's payment on time	2.63	4	N
5	Contractor's request for interest on late payment when the payment is delayed beyond the time period specified on the contract	2.74	3	N
6	When the delay period beyond the time stipulated on the contract, the Contractor reduce the rate of the progress as per the contract conditions	3.86	1	A
7	When the delay period beyond the time stipulated on the contract, the Contractor suspend the work as per the contract conditions	3.44	2	A

#### 4.7 Management of Change

Respondents agree that variation on the contract is common on federal road construction projects, but most of the respondent could not decide whether when variation is issued all information are provided on the variation instruction and the contractor properly address his request for time and cost for variation instructions.

Most of the respondents feel that variation instructions are not properly addressed on the project. The respondent couldn't decide regarding

- When the varied work required the determination of new rate or cost, usually agreement is reached
- While instructing variation, the Engineer follows all the procedures stipulated on the contract properly
- Overall variations are handled on the project as per the contract procedures

Table 4-11:[Change Management]

I/No	Description	Mean Score	Rank	Attribute
1	Variation on the Contract is common on road projects	3.47	1	A
2	When variation is issued all the information required for the varied work is properly addressed	3.28	2	N
3	Contractor properly address his request for time and Cost whenever he receives variation instruction	2.89	4	N
4	Variation instruction are properly addressed by the Engineer	2.14	7	D
5	When the varied work required the determination of new rate or cost usually agreement is reached	2.72	5	N
6	While instructing variation the Engineer follows all the procedures on the contract properly	2.70	6	N
7	Overall variations are handled on the project as per the contract procedures	2.95	3	N

#### 4.8 Contract Closing Out

Regarding the contract closing out the respondent believes that it is not handled as per the requirement of the contract and most of the issue regarding the contract are resolved during final acceptance of the work in contrary to the contract requirements.

Table 4-12: [Contract Closing out]

I/No	Description	Mean Score	Rank	Attribute
1	When the Contractor completes the Work properly issue its request for acceptance of the work as per the contract	2.54	3	D

I/No	Description	Mean Score	Rank	Attribute
2	The Engineer process the Contractor's request for taking over as per the Contract requirement	2.54	3	D
3	Contractor usually fulfil his contract requirement during completion of the work (complete all the work required for substantial completion)	2.32	7	D
4	Contractor properly handover resources that should be reverted to the Employer	2.51	5	D
5	Most of the issue regarding the contract is resolved during final acceptance of the work	3.68	1	A
6	When Contractor request for handing over of the site Consultant properly inspect the work on time as per the requirement of the contract	2.77	2	N
7	The Contractor requests for the final account on time.	2.39	6	D

#### 4.9 Challenges and Problems in Contract Administration

##### 4.9.1 Major Challenges in Administration of the Contract

The challenges and problems in contract administration have been assessed and it is found out that most of the respondent agree that Poor communication between team, Lack of clarity of the Contract document during drafting, Parties to the Contract and the administrator does not properly understand and implement the duties and responsibilities properly, Parties are not being aware of the hidden risks and its allocation, and On contract documents important information Hidden Amongst Paperwork (No standard format) are the major challenges and problems on projects. However, the respondents disagree that the minimum involvement of the implementing team in drafting the contract is the challenge and problems in contract administration.

Based on the respondents the lack of understanding of the duties and responsibilities is the main challenge and problem in contract administration and the minimum level of involvement of the implementing team in drafting the contract is the least problem and challenge in contract administration in terms of rank.

Table 4-13:[Problems in Contract Administration]

I/No	Description	Mean Score	Rank	Attribute
1	Poor communication between team	3.77	3	A
2	Lack of clarity of the Contract document during drafting.	3.70	4	A
3	Parties to the Contract and the administrator does not properly understand and implement the duties and responsibilities properly	4.00	1	A
4	The minimum Level of Involvement of the implementing team in drafting of the Contract	2.23	7	D
5	Parties are not being aware of the hidden risks and its allocation	3.56	6	A

I/No	Description	Mean Score	Rank	Attribute
6	Poor communication between parties	3.58	5	A
7	On contract documents important information Hidden Amongst Paperwork (No standard format)	3.89	2	A

#### 4.9.2 Main challenges and problems Related to Administration of Contract

The respondents rank the main challenges and problems related to administration of contract and it is found that “Not properly drafted Contract” ranked as the main challenges and problems in administering the contract and the least problem and challenge is “Failure to have proper contract administration plan.”

Table 4-14: [Challenges in Contract administration]

No.	Questions	Rank				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
1	Not properly drafted Contract	23	20	8	6	0
2	Unrealistic Condition on the Contract	8	28	19	2	0
3	Lack of Experience on Contract Administration	17	9	21	10	
4	Failure to have proper contract administration plan	0	0	2	4	51
5	Lack of knowledge	0	2	10	41	4

#### 4.10 Advantage of Proper Contract Management

The respondents agree that the proper contract management helps to complete the project within the scheduled time, budgeted cost and with the predetermined quality to the satisfaction of the customer. And the mean rank shows that the proper contract management is advantageous for the project implementation in the order of Time, Cost and Quality.

Table 4-15:[ Advantage of Contract Management]

I/No	Description	Mean Score	Rank	Attribute
1	Properly administering the Contract helps to complete the project within the scheduled Contract period?	3.72	1	A
2	Properly administering the Contract helps to complete the project within the budgeted cost	3.65	2	A
3	Properly administering the contract helps for completing the project with the predetermined quality to the satisfaction of the customer?	3.51	3	A

On the other question the respondent were asked to prioritize the impact of good contract management on fulfilling the project’s objective and the result found shows that the order is in the order of Time, Quality and Cost.

Table 4-16: [Advantage of Contract Management]

No.	Questions	Rank		
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
1	Time	39	17	1
2	Cost	10	24	33
3	Quality	12	28	17

#### 4.11 Interpretation and Discussion

This section discusses the study findings of both the questionnaire survey and desk study results. The impact of the contract management in terms of contractual compliance, monitoring and evaluation, claims and dispute administration, payment process administration, management of change and contract closing out is discussed based on the data found from the respondents. In addition, the challenges, problems and advantage of contract management practice in Ethiopian Federal Road construction is also discussed.

##### 4.11.1 Contractual Compliances

As discussed in the literature review, careful compliance of the contractual responsibilities is mandatory for the successful Contract management and from the contract documents that are used in contract for the construction of the road in federal road projects in Ethiopia, the contractual compliances of the insurances and securities, work program and reporting is assessed this research.

##### 4.11.1.1 Insurances and Securities

The Contractors are required to submit performance bond, advance guarantee, Contractor's All Risk Insurance (CAR) and Workmen insurance as per the requirement of the contract. For example, the FIDIC standard forms of contract (1995), which is widely used standard form of contract in federal road construction projects required the Contractor to submit

1. Performance security, as per subclause 4.2 [Performance Security] after 28 days from the effective date.
2. Advance payment guarantee as per subclause 13.2 [Advance payment] when the contractor applies for advance payment
3. Insurances like CAR and Workmen as per clause 18 [Insurance] from the start the contract

The result discussed above also shows that the Contractor provided the securities and insurances as per the requirements of the contract, however with regard to the submission of workman insurance projects contractor doesn't comply with the requirement of the contract and further the contractor is not renewing the insurances on time or prior its expiry. Therefore, projects are administered without the insurances and securities. That means the risk that are transferred to the surety companies are not properly administered and it invites higher risk on the Employer and it could be concluded that the contractual compliance with regard to insurance and securities is not properly administered in federal road project contract.

#### 4.11.1.2 Work Program

On the contract at the outset of the project implementation, the contractors are required to submit work program and revise the same whenever the progress of the project is not line with the program or shows significant delay.

1. Work program, as per subclause 4.14 [Programme] within the time specified on the appendix to tender, usually Ethiopian Roads Authorities fixes that date within 28 after the commencement date and required to revise whenever the progress doesn't much with the plan.

The collected data shows that on most of the projects, the contractor submitted the master work program on time, however, the content of the submission is usually is not found to be acceptable, 67% of the respondent believe that the content of the work program submitted is not acceptable. Further to this the Contractor does not regularly update the program depending on the progress of the project and usually the contractor does not submit the supplementary program when requested.

It could be concluded that the contractor usually fails to provide the work program as per the requirement of the contract and fails to update the program.

Most of the result found agrees with Abebe's (2015) study on work programing and implementation practice in Federal road projects, however the collected data shows that master work program is submitted on time, it is in contrary with the result Abebe found in his study.

#### 4.11.1.3 Reports

On the contract the contractors are required to submit various reports among them, the Condition of the Contract states that

1. Monthly progress report as per 4.15 [Progress Report] within 14days of the last day of the period which relates.

The collected data, however, shows that the contractor is not submitting the mobilization report, environmental, health and safety report which are part of the monthly progress on time. However most of the respondent feels that the contractor submits the quality control manual on time. Reports on project is required to acquaint the Employer and the consultant on various aspects of the project. It is also one of the major monitoring and evaluation tools to properly administer the project, thus its submission as per the requirement of the contract has paramount importance on the realization of the project's objectives.

With regard to the report submission, generally it could be concluded that the contractor is not complying with the requirement of the contract with regard to the submission of the report.

#### 4.11.2 Monitoring and Evaluation

In due performance of the project, progress is monitored and evaluated. For proper setup of what is required and expected from the project, the contract clearly specifies that the contractor should execute and progress the work to complete the project on time, within the budget and prescribed quality. Whenever the actual progress of the project is not in line with the plan, after evaluating the progress of the project instruction to correct should be given to the contractor as per the requirement of the contract.

The collected data shows that neither the Employer nor the Consultant regularly follow up the progress of the project and instruction to correct the same is not also given on time to the contractor. In addition, the most respondents felt that when Consultant's evaluate the progress of the project, they are biased and unfair.

#### 4.11.3 Claim and Dispute Administration

One of the main issues during administration of the contract is claim and dispute administration, the contract usually states requirements for administering claim and dispute. The contractor is required to properly file notice to claim and then submit the detail particular within the time

frame stipulated in the contract. Usually contracts set the requirement to effectively manage the claim and dispute.

The data collected shows that time and cost claims are submitted in due performance of the project, but regarding the number of the claims, the number of time extension claim ranges between 2 and 4, however for the cost claims out of the projects where the data collected 66.7% of the projects entertain none to one cost claims. However, dispute is not common on projects in Ethiopian Roads Authorities projects, because on 57.9% of the projects there were no dispute and on 31.6% of the projects only one dispute was manifested and/or encountered.

Therefore, it could be concluded that time extension request is more common than cost claim. And dispute is not common on road projects administered in Ethiopian Roads Authorities.

During administration of the time extension and cost claims the contract usually require the submission of notice and detailed particulars within the time frame stipulated therein, the collected data shows that the contractor is not submitting the notice and the details particular on time as pre the contract requirements. On the other hand, the consultant is also not advising the contractor to keep the contemporary records which could be a basis to make determination. It shows that the administration of the time and cost claim is not acceptable. The respondent only agrees that prior making determination of the time and cost, consultation is done between parties.

On projects in order to administer dispute between the parties to the contract, dispute review expert (DRE) is assigned on projects, however, the collected data shows that dispute review expert is not assigned on time on projects and notice to dispute is also not given on time. The response found with regard to the availability of dispute totally contradict with the data found when respondent requested to state the number of disputes on projects, the unavailability of dispute on projects where 57.9% however, most of the respondents felt that dispute is common on projects.

#### 4.11.4 Payment Process Administration

The data collected shows that Contractors are not submitting the monthly statements on time and the content of the submission is not also found to be acceptable. On the other hand, the engineer is not certifying the payments on time. However, once payment it certified, it is difficult to conclude either the Employer pay on time or not. Further, the contractor requests for interest on late payment.

Most of the respondent agree that due to the delay in payment the Contractor will reduce the rate of progress and if it goes beyond some period as stipulated on the contract suspend the project work.

#### 4.11.5 Change Management

Change or variation on the contract is common because of the various reasons, on this research the change management is assessed. As it is expected from the review of the literature, respondent feels that variation is common on road projects. The respondent didn't agree or disagree regarding the content of the variation instruction is acceptable or not and the Contractor addresses his request for time and cost whenever variation instruction is issued. When variation is instructed, the Engineer is not properly addressing the variation instruction so that changes are implemented without causing problems on the project.

Generally, it could be concluded that variation is not handled well on projects.

#### 4.11.6 Contract Closing Out

Closing out of contract should also be given proper attention to ensure the project is successfully completed and ready for used. In order to close out the contract, it is mandatory to properly address what is required under the contract. The collected data shows that the closing out of the contract like handing over of the project, processing of the contractor's request, contractor's substantial completion of the project, handing over of resources to be reverted to the Employer and the timing of the final inspection is not as per the contract and usually delayed. In addition, respondents fell that most of the outstanding issue are pushed until the project is completed.

#### 4.11.7 Challenges and Problems in Contract Administration

The challenges and problems in contract administration has been identified from the review of related literature and the respondent were requested to reflect their view and it is found out that the respondent agree with poor communication between team, lack of clarity of the contract document during, parties to the contract and the administrator not properly understand and implement the duties and responsibilities properly, parties are not being aware of the hidden risks and its allocation, poor communication between parties and not having standard format are the major challenges in administration of the contract. However, responded disagree that minimum

level of Involvement of the implementing team in drafting the contract is major challenge in contract administration.

Based on the frequency of the respondent, the major challenges of contract administration are ranked as

1. Parties to the Contract and the administrator does not properly understand and implement the duties and responsibilities properly
2. On contract documents important information Hidden Amongst Paperwork (No standard format)
3. Poor communication between team
4. Lack of clarity of the Contract document during drafting.
5. Poor communication between parties
6. The minimum Level of Involvement of the implementing team in drafting of the Contract

Further, the respondents were requested to rank the main challenges and problems related to administration of the road contract and it is found out that “Not properly drafted contract” and “Unrealistic Conditions on the contract” are the high ranked problems in administration of projects and “Failure to have proper contract administration plan” and “Lack of knowledge” are the least ranked problem and challenge in road projects.

#### 4.11.8 Advantage of Proper Contract Management

It is crystal clear that the main objects of the project management are completing the project on time within the budgeted cost and as per the predetermined quality. The impact of proper contract management on time, cost and quality is assessed and ranked.

Most of the respondent agree that proper contract management have an impact on completing the project with the budgeted cost, on time and predefined quality. Based on the collected data the contract administration has advantage in the order of time, cost and quality.

#### 4.11.9 Comprehensive Interpretation of result

The data collected from the respondents are analyzed based on contractual compliances, monitoring and evaluation, claim and dispute administration, payment process, management of change and closing out, and the attributes for each criterion is presented herein under.

Table 4-17:[Summary of Components]

I/No	Description	% or Mean Score	Attribute	+ve/-ve
1	Contractual Compliances			-ve
	A) Insurances and Securities	63.16%	Acceptable	
	B) Work Program	61.75%	Not acceptable	
	C) Reports	46.68%	Not acceptable	
2	Monitoring and Evaluation	2.48	Disagree	-ve
3	Claim and Dispute Administration			-ve
	1. Claim	2.45	Disagree	
	2. Disputes	3.13	Neutral	
4	Payment Process Administration	2.8	Neutral	
5	Management of Change	2.88	Neutral	
6	Contract Closing out	2.68	Neutral	

Table 4-18:[ Attribute]

I/No	Description	Attribute		
		-ve	Neutral	+ve
1	Contractual Compliance			
2	Monitoring and Evaluation			
3	Claim and Dispute Administration			
4	Payment Process Administration			
5	Management of Change			
6	Contract Closing out			

In due performance of the project there are challenges in contract administration and the major problems identified are

1. Poor communication between the team
2. Lack of clarity of the contract document during drafting

3. Parties to the contract and the administrator does not properly understand and implement the duties and responsibilities properly,
4. Parties are not being aware of the hidden risk and its allocation
5. Poor communication between parties
6. On contract document important information hidden amongst paperwork's (no Standard format)

And with regard to the major problem identified are the under listed in their rank of the impact

1. Not properly drafted contract
2. Unrealistic condition of contract
3. Lack of experience in contract administration
4. Lack of knowledge and
5. Failure to have proper contract administration

The impact of the contract administration is analyzed based on the collected data and it is found out that it has high impact on time, medium impact on cost and less impact on quality.

The result shows that a good contract management is helpful for achieving the project objectives, based on the results found it is most important for the project to be completed on time and least important to the quality of the works.

Among the various problems in contract administration the poor communication and not properly drafted contract are found to be the major challenges and problem of contract administration. Currently, the contract administration is found not to be acceptable and contactors' and consultants are not executing their work as per the requirement of the contract. It shows that contract management is not given enough attention despite its impact on completing the project on time, budgeted cost and desired quality.

Based on the result found from the data collected conclusion and recommendations are drawn and presented in the ensuing section.

## **CHAPTER 5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

### **5.1 Introduction**

In this chapter of the research paper the conclusion and recommendation of the research is presented based on the outcome of the data collected for the research work.

### **5.2 Summary**

The result shows that the overall contract management practice is not found to be acceptable despite its paramount importance on the overall project success, among others the poor communication and not properly drafted contract are found to be the major challenges and problem of contract administration. And the major problems identified are the presence of not properly drafted contract condition, unrealistic condition of contract, lack of experience in contract administration, lack of knowledge and failure to properly administrating the contract.

### **5.3 Conclusions**

The objective of the study is to assess the contract management practice in federal road construction projects, the researcher found out that the contract management with regard to the compliance of the contractual requirements, monitoring and evaluation of projects, claim and disputes administration, payment administration, change administration and contract closing out is not found to be satisfactory.

The result suggested that contractors are usually complying with the contractual requirements, and the result shows that contractors provide and renew contract securities and insurances on time as per the requirement of the contract, however, contractors are not submitting the program on time, and its content is not found to be acceptable and revision of the work program as per the requirement of the contract is not also satisfactory, a thesis by Abebe (2015) also shows that program is not submitted on time in projects. In addition to this, the various contractual reports are not submitted on time by the Contractor. Generally, we could conclude that the contractual requirements are not fulfilled by the parties to the contract in the due performance of projects.

During monitoring and evaluation projects, the results showed that the Consultant and the Employer are not evaluating the progress of the project regularly, instruction to correct the progress of the project is not given properly and consultant evaluation of the progress of the project is found to be unfair and biased based on the result found.

In the federal road projects, time extension is the most common relative with the cost claims, on average 2 to 4 claims are submitted on due performance of the project, whereas cost claims are submitted only one on projects. It could be concluded that time extension claim is common in federal road project relative to the cost claims. In contrary to the claims submission dispute is not common on projects. The reason why dispute is not common is not covered in this research.

In addition, the administration of the claim by the contractor and the consultant is not found to be acceptable. Notices and detailed particulars of the claims are not submitted on the time as per the requirement of the contract on the contractor side and the consultant is not giving his determination on time fairly and impartially.

Regarding the dispute, on the Federal Road projects contract, the Dispute Review Expert is not assigned on time, however when assigned the expert give ruling of the case on time. But from the results found it could not be decided whether the impartiality and the agreement on the decision of the expert by the Employer and the Contractor, thus it could be further researched.

Contractors are not submitting the monthly statement on time with the acceptable content stipulated in the contract. On the flip side, the consultant is not also certifying the monthly payments on time. However, the Employer make payments fairly to the Contractor's monthly payments. when the payments are delayed the contractor requests interest on late payment, reduce rate of progress and suspend the project when payment is delayed beyond the period stipulated on the contract.

The result shows that variation order is very common on projects however its administration on the contractors' and the consultants' side is not found satisfactory.

When projects are completed the contractor has to request for final inspection on time and the Engineer has to inspect the work presumed to be completed and give his recommendation for acceptance or rejection, it is evident that all these processes have a time frame to comply on the contract documents, however, the contractor is not requesting on time for acceptance of the work completed substantially and the consultant is not also processing the request as per the requirement of the contract.

Issues that should have been completed from time to time in the due performance of the contract are dragged up to the final acceptance of the project and the contractor is not requesting the final account as per the condition on the contract.

The major contract administration problem identified in their order are the following

1. Poor communication between the team
2. Lack of clarity of the contract document during drafting
3. Parties to the contract and the administrator does not properly understand and implement the duties and responsibilities properly,
4. Parties are not being aware of the hidden risk and its allocation
5. Poor communication between parties
6. On contract document important information hidden amongst paperwork's (no Standard format)

Proper contract management has an impact on the projects objective and it is found that the proper contract management highly impacts the time, and less impacts the quality of the work but generally it has an impact on all the time, cost and quality.

#### 5.4 Recommendations

The following points are recommended to all parties in order administer contract properly in construction projects.

- Since proper contract administration is important for completing projects on time, within budgeted cost and to the desired quality, it is important for stockholders involved in road construction give due attention for contract administration in due performance of the project.
- Contractor's should submit the work program and reports on time and update as per the progress of the project for proper administration of the project and follow up of the progress of the project.
- The Employer as well as the Consultant should regularly follow progress of the project and give instruction to correct the same to the contract. The Consultant should fairly evaluation the project without bias.

- Contractor's should give notice, keep contemporary records and submit the detailed particular of the claim on time. In addition, for proper administration of dispute the Employer should assign Dispute Review Expert on time.
- Contractor's should improve the timing and the content their submission of the monthly statement on one hand and on the other hand the consultant should certify the payments on time to avoid unnecessary cost on the Employer in the form of interest on late payment and negative impact on the progress of the project.
- Since variation is common on projects it is high important to handle it properly, therefore, Consultants', Contractors' and the Employer should give attention and handle the variation properly.
- Various case should not be left unresolved in due performance of the project, it is better to solve issues foot by foot to get a better output.
- Communication between the project team is important for good contract management, hence communication should be enhanced between the consultant, the contractor and the employer.
- While drafting the contract document, the Employer should give due care to the preparation of the contract in terms of clarity to the parties to the contract and the administrator.
- Parties before entering into the contract should properly analyze and be prepared for the risks hidden in the contract so that there will not be a surprise in due performance of the project.
- Training on contract management for all the Employer, the Contractor and the Consultant is required to improve the contract administration capacity of parties involved on projects

## 5.5 Limitation and Suggestion for further study

The researcher would like to suggest for future research that are related with this study are:

- ✓ In this research it is found that the work program is master work program is not submitted on time as per the contract requirement, it doesn't align with past study made on the area, hence it is recommended that it could be further studied to make conclusion.

- ✓ The research shows that dispute is not common on project, but the reason is not analyzed in this research, therefore, the reason why dispute is not common in federal road construction project should be studied, is it because of the relationship between the parties or lack of experts etc.... shall be studied.

## References

1. Abebe Nigussie, (2015), *thesis on work programing and implementation in federal road projects*.
2. Abd Majid, McCaffer, (1997), *Assessment of Work Performance of Maintenance Contractors in Saudi Arabia*, Journal of Management in Engineering
3. Aberdeen Group, (2004), *best practices in Contract Management- Strategies for optimizing Business Relationship*.
4. A D Allwright & RW Oliver Revised by E S Singleton & K R Burnet (1997), *A professional guide to contracting including model conditions*.
5. Baccarini, D., 1999, *The logical framework method for defining project success*, *Project Management Journal*, December 1999, vol.30, No.4, pp. 25-32.
6. Barbara J. Jackson, Ph.D., DBIA, 2004, *Construction Management JumpStart*,
7. Charels Handy (Fourth Edition 1993), *Understanding Organizations- Penguin Risk Management in Purchasing and Supply Management- Positions on Practice*, CIPS
8. Civil Code of The Empire of Ethiopia Proclamation No. 165 of, 1960
9. ERA (2021), Performance rating, [Online], Available:  
<http://www.era.gov.et/web/guest/about-us> [Accessed:12 January 2021]
10. ERA (2020), publications, [Online], Available: <http://www.era.gov.et/web/guest/about-us> [Accessed: December 2020]
11. ERA. (2014), *Road Sector Development Program 15 Years Performance Assessment*.
12. FIDIC Association, (1995). *Fédération Internationales des Ingénieurs Conseils Condition of Contract*; Switzerland.
13. Federal Democratic Republic of Ethiopia, Ministry of Finance, ERA (2015), *Road Sector Development Program Phase-V*
14. FIELD, A. P. 2006. *Discovering Statistics Using SPSS*, Sage Publications Inc
15. F Harvey (Revised Edition 1998), *CIPS Law of Contract*
16. Gizachew Tadele, (2017), *thesis on Contractor's Payment Delay and Its Impact on Road Projects Administered under Ethiopian Roads Authority*.
17. Harold Kerzner, Ph.D, 2003, *PROJECT MANAGEMENT A Systems Approach to Planning, Scheduling, and Controlling -EIGHTH EDITION*

18. John M.N and Herman.S, 2008, *Project Management for Business, Engineering, and Technology, Principles and Practice- 3<sup>rd</sup> editions*
19. Kenneth Lysons & Michael Gillingham (Six Edition 2003), *Management*
20. Kothari. C.R, (2004). *RESEARCH METHODOLOGY Methods and Techniques*. (2<sup>nd</sup> ed.). New Age International (P) Ltd., Publishers.
- 21.
22. Munns,A. and Bjeirmi, B., 1996, *The role of project management in achieving project success*, International Journal of Project Management, Vol.14, No.2, pp.81-87
23. National Contract Management Association,2019 *The Contract Management Standard<sup>TM</sup>[CMS<sup>TM</sup>]-Second Edition*,
24. Naoum, S. (1998). *Dissertation research and writing for construction students*; Oxford, UK: Butterworth-Heinemann.
25. Nadler, J. T., Weston, R., & Voyles, E. C. (2015). Stuck in the middle: The use and interpretation of mid-points in items on questionnaires. *The Journal of General Psychology*, 142(2), 71-89, doi:10.1080/00221309.2014.994590
26. Neuman W.L. (2007). *Basics of Social Research: Qualitative and Quantitative Approaches*. (2<sup>nd</sup>ed.). Bosten: Pearson Education Inc.
27. Nicholas and Steyn (2008), *Project Management for Business, Engineering and Technology Principle and Practice*.
28. Project Management Institute (2000), *Construction Extension to PMBOK® Guide*
29. Project Management Institute (2013), *A guide to the project management body of knowledge (PMBOK® Guide) – Fifth Edition*
30. Republic of South Africa (2010), *Contract Management Guide*, <http://www.businessdictionary.com/definition/managment>
31. Saunders, M, Lewis, P. and Thornhill, A. (2007). *Research Methods for Business Students*. (4<sup>thed.</sup>). England: Pearson Education Limited.
32. Temesgen Abebe, (2015), *thesis on Causes of Variation Orders and Selected Case Study in Addis Ababa City Roads Authority*.
33. Tewodros Zewdu, (2015), *thesis on Causes and Effects of Variation Orders in Road Construciton Projects; the case of national works contract administered by Addis Ababa City Roads Authority*

34. Vanderstoep, S.W. and Johnston, D.D. (2009). *Research Methods for Everyday Life Blending Qualitative and Quantitative Approaches*. Jossey-Bass, San Francisco.
35. William, G. Z. and Barry J. B. (2010). *Essentials of Marketing Research*. (4<sup>th</sup>ed.). USA: Cengage Learning.
36. World Bank (2018), Procurement Guidance Contract Management Practice
37. Youssef, Waleed Mahfouz, 2019/01/29, *effective contract management for EPC projects*  
*10.13140/rg.2.2.19158.91200*

## **Appendices**

### Research Instrument

## Research Questionnaire

Dear participants,

I am currently working on a research on Contract Management Practice in federal Road Projects; as a partial fulfillment for my MBA study in Project Management in Addis Ababa University School of Commerce. This research is aimed to assess the contract management practice in the construction of federal road projects and to integrate conceptual material with the practical experience in federal road construction projects in Ethiopia and to recommend focus area during administering the contract from best practices.

To successfully conduct this research, it is mandatory to look into the issues from different perspectives by involving professionals who have experience in the Ethiopian construction industry. In this respect, I believe you are among the one who can give the correct information; hence I kindly request you to respond to the questions.

I would like to confirm you that your response will be kept strictly confidential and it will be used exclusively for the purpose of this research. Besides, your quick response is extremely important in order to finalize the research timely and I would appreciate if you complete and return it within one week of your acceptance of same.

Thank you very much for your time and cooperation, and looking forward to receiving your response.

Yours faithfully,

Yehyes Dereje

Tel: +251911 91 28 91

E-mail: [yehyesdereje@gmail.com](mailto:yehyesdereje@gmail.com)

**1. General Information**

**Direction: The questions below are related to your organization and yourself. Please indicate your response by ticking (X or √ ) the appropriate box (es) or by filling the blank spaces provided, as appropriate.**

1.1. Name of the Organization \_\_\_\_\_ (optional)

1.2. From the following which your company belongs to

Employer  Contractor  Consultant

1.3. Origin of Your Company

Foreign  Local

1.4. Years of Establishment of your company

Less than 5 years  Between 5 and 10  Greater than 10

1.5. your firm's experience in Construction of the Ethiopian Federal Road Projects

Less than 5 years  Between 5 and 10  Greater than 10

1.6. Your Personal Experience in Road Construction Projects

Less than 5 years  Between 5 and 10  Greater than 10

1.7. What is the level of your educational Background?

BSc  Msc  Above Msc

1.8. Your name, position and Contract Address

Name (optional) \_\_\_\_\_

Job Title \_\_\_\_\_

Tel. (Optional) \_\_\_\_\_

Email (Optional) \_\_\_\_\_

## 2. Contractual Compliances

The following contractual requirement are extracted from the contract and are identified from review of literature and personal experience in the process of contract administration in road construction projects. Please consider in terms of your organization's experience and/or your knowledge the compliance of the under listed contractual requirements and respond by ticking in (X or √) the appropriate box, as appropriate.

I No	Requirement of the Contract	Yes	No
<b>Securities</b>			
1	On the project you are administering does performance security submitted as per the requirement of the contract	<input type="checkbox"/>	<input type="checkbox"/>
2	On the project you are administering does Advance guarantee submitted as per the requirement of the contract	<input type="checkbox"/>	<input type="checkbox"/>
3	On the project you are administering does CAR insurance submitted as per the requirement of the contract	<input type="checkbox"/>	<input type="checkbox"/>
4	On the project you are administering does Workmen insurance submitted as per the requirement of the contract	<input type="checkbox"/>	<input type="checkbox"/>
5	Does the contractor renew the insurances and guarantees on time or prior to its expiry	<input type="checkbox"/>	<input type="checkbox"/>
<b>Work Program</b>			
1	does the Contractor providing the master work program as per the requirement of the contract	<input type="checkbox"/>	<input type="checkbox"/>
2	does the content of the submitted program found to be acceptable	<input type="checkbox"/>	<input type="checkbox"/>
3	Depending on the progress of the project, does the contractor updated the work program	<input type="checkbox"/>	<input type="checkbox"/>
4	Does the Contractor revise the program regularly as required under the contract	<input type="checkbox"/>	<input type="checkbox"/>
5	Does the Contractor submit supplementary program when requested	<input type="checkbox"/>	<input type="checkbox"/>

I No	Requirement of the Contract	Yes	No
<b>Report</b>			
1	Does the Contractor submit mobilization of resources report properly	<input type="checkbox"/>	<input type="checkbox"/>
2	Does the Contractor submit the Quality Control manual	<input type="checkbox"/>	<input type="checkbox"/>
3	Does the Contractor Submit the Environmental, Health and Safety Report on time	<input type="checkbox"/>	<input type="checkbox"/>
4	Does the Contractor report whenever accident happened on the project	<input type="checkbox"/>	<input type="checkbox"/>
5	Dose the contractor submit monthly progress report on time	<input type="checkbox"/>	<input type="checkbox"/>

### 3. Monitoring and Evaluation

**During performance of the Contract, projects are monitored and various contractual Measures are taken to properly administer the contract of the project so that projects are completed within the scheduled time, budgeted cost and the desired qualities are met, the underlined points are extracted from review of literature and personal experience. Please consider in terms of your organization's experience and/or your knowledge the degree of consideration of the following factors and respond by ticking in (X or √) the appropriate box**

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Consultant regularly evaluate progress of the project					
2	Instruction to correct the progress of the project as per the condition of the contract is issued by the Consultant regularly					
3	Advise on how to improve the progress of the project is issued by the Consultant as required					
4	Client regularly evaluate Contractor's progress					
5	Consultant's evaluation of the progress of the					

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	project is usually fair and unbiased					

#### 4. Claim and Dispute Administration

**During performance of the Contract, one of the issues leads to dispute is improper administration of claim as per the requirement of the contract and lack of proper records, from review of literature and personal experience.**

1. Does the Contractor submitted Time Extension Claim?

Yes  No

2. If your answer is Yes for Question No. 1, please specify the number of EoT claims?

Only 1   $\geq 2$  or  $\leq 4$   Greater than 4

3. Does the Contractor submitted Cost Claim?

Yes  No

4. If your answer is Yes for Question No. 1, please specify the number of Cost claims?

Only 1   $\geq 2$  or  $\leq 4$   Greater than 4

5. Is there any dispute on the project?

None   $\geq 1$  or  $\leq 2$   Greater than 2

6. Please consider in terms of your organization's experience and/or your knowledge the degree of consideration of the following factors and respond by ticking in (X or  $\surd$ ) the appropriate box

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
4.1 Claim						
1	Contractor Issue Notice to Claim on time whenever Delaying event arises on site as per the Contract requirement					

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
2	The Consultant advise the Contractor to keep the Contemporary record when notice is served by the Contractor					
3	The Content of the Notice of delay the contractor submit usually found to be acceptable					
4	The Contractor submit the Detail particular within the time period specified on the Contract					
5	Engineer give determination for the claim within a reasonable time					
6	Consultation of the parties to the Contract is made prior making determination					
7	Usually Engineer acts impartial when giving determination					
4.2 Dispute						
1	Dispute Review expert assigned for the Project as per the Contract requirement on time					
2	Notice for dispute issued on time					
3	Dispute on the project is common					
4	Dispute review expert usually give their ruling on time					
5	Usually one of the party Either the Employer or the Contractor disagree with the decision of the Dispute Review expert					
6	Usually Dispute Review Expert acts impartial when giving rulings					
7	when either of the parties didn't agree with the DRE decision give notice to arbitration on time					

## 5. Payment Process Administration

Payment is a blood for the Contractor to properly manage and run the project, as a result issues related to payment has to be administered properly not to impact the progress of the project on one hand and result in unnecessary cost on the Employer. The payment issue if goes beyond the limit, it might also lead to suspension of the project and ultimately termination of the contract. Thus, to meet the project's objective

administering the payment as per the contract has paramount importance. Please consider in terms of your organization's experience and/or your knowledge the degree of consideration of the following factors and respond by ticking in (X or √)

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Contractor properly submit monthly statement on time					
2	Contractor's monthly statement content is found to be acceptable					
3	The Engineer certify the payment within the time frame stipulated on the Contract					
4	The Employer pay the Contractor's payment on time					
5	Contractor's request for interest on late payment when the payment is delayed beyond the time period specified on the contract					
6	When the delay period beyond the time stipulated on the contract, the Contractor reduce the rate of the progress as per the contract conditions					
7	When the delay period beyond the time stipulated on the contract, the Contractor suspend the work as per the contract conditions					

## 6. Management of Change

One of the major issues during administration of a contract during performance of the project is managing changes, managing changes is important to meeting project's objective and avoid disputes. Please consider in terms of your organization's experience and/or your knowledge the degree of consideration of the following factors and respond by ticking in (X or √) the appropriate box

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Variation on the Contract is common on road projects					
2	When variation is issued all the information required for the varied work is properly addressed					

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
3	Contractor properly address his request for time and Cost whenever he receives variation instruction					
4	Variation instruction are properly addressed by the Engineer					
5	When the varied work required the determination of new rate or cost usually agreement is reached					
6	While instructing variation the Engineer follows all the procedures on the contract properly					
7	Overall variation are handled on the project as per the contract procedures					

## 7. Contract Closing out

It is equally or even more emphasis should be given for proper closing out of contract and from literature and personal experiences points that should be taken into consideration in this study are listed herein below. Please consider in terms of your organization's experience and/or your knowledge the degree of consideration of the following factors and respond by ticking in (X or  $\surd$ ) the appropriate box

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	When the Contractor completes the Work properly issue its request for acceptance of the work as per the contract					
2	The Engineer process the Contractor's request for taking over as per the Contract requirement					
3	Contractor usually fulfill his contract requirement during completion of the work (complete all the work required for substantial completion)					
4	Contractor properly handover resources that should be reverted to the Employer					
5	Most of the issue regarding the contract is resolved during final acceptance of the work					
6	When Contractor request for handing over of the site Consultant properly inspect the work on time as per the requirement of the contract					

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
7	The Contractor requests for the final account on time.					

## 8. Challenges and Problems in Contract Administration

During performance of the Contract, various challenges has been faced, from review of literature and personal experience in the process of contract administration in road construction projects the challenges and problems in contract administration has been identified. Please consider in terms of your organization's experience and/or your knowledge the degree of consideration of the following factors in the work program preparation practice and respond by ticking in (X or √) the appropriate box

### 1. Major Challenges in administration of the Contract

I/ No	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Poor communication between team					
2	Lack of clarity of the Contract document during drafting.					
3	Parties to the Contract and the administrator does not properly understand and implement the duties and responsibilities properly					
4	The minimum Level of Involvement of the implementing team in drafting of the Contract					
5	Parties are not being aware of the hidden risks and its allocation					
6	Poor communication between parties					
7	On contract documents important information Hidden Amongst Paperwork (No standard format)					

### 2. Which of the following is the main challenges and problems related to administration of the road contracts? (Please rank it as 1, 2, 3...)

Not properly drafted  
Contract

Unrealistic  
Condition on the

Lack of Experience on  
Contract

— Contract — Administration —

Failure to have proper contract administration plan  Lack of knowledge

Please mention if any other \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Fulfilling to the Condition of the Contract strictly is difficult?  
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

4. Professional Contract administrator assigned for the Project?  
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

5. Who administer the Contract in due performance of the project?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**9. Advantage of Proper Contract Management**

**Direction: The questions below are related to the advantage of the contract administration for meeting the project’s objectives. Please indicate your response by ticking (X or √) the appropriate box (es), as appropriate.**

1. Properly administering the Contract helps to complete the project within the scheduled Contract period?  
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

2. Properly administering the Contract helps to complete the project within the budgeted cost?

Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

3. Properly administering the contract helps for completing the project with the predetermined quality to the satisfaction of the customer?

Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

4. Please rank the impact of good Contract management on fulfilling the project's objective? (Please rank it as 1, 2, 3...)

Time

Cost

Quality

**10. If you have other comments on the subject matter, please forward your comment**

---

---

---

---

---

**--The End--**

**Please kindly check all points are responded and Thanks for sharing your views and time**