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ASSESSMENT OF CONTRACT MANAGEMENT PRACTICE AND PERFORMANCE OF ROAD CONSTRUCTION SCHEME: THE CASE OF JIGJIG – SEGAG PROJECT.

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DECLARATION

I, Hawi Jemal, declare that the research proposal entitled "ASSESSMENT OF CONTRACT MANAGEMENT PRACTICE AND PERFORMANCE OF ROAD CONSTRUCTION SCHEME: THE CASE OF JIGJIG – SEGAG PROJECT." 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

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This research project has been submitted for examination with my approval as the college advisor

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APPROVAL PAGE

As members of the examining board of the final MSc, Open defense, we verify that we have read and evaluated the thesis prepared by **Hawi Jemal**, entitled **Assessment of Contract Management Practice and Performance of Road Construction Scheme: The case of Jigjig-Segag project.** And recommended for acceptance as a partial fulfilment to the requirement for the Master's Degree of Project Management.

Date of Defense: _____

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2. _____ _____ _____
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4. _____ _____ _____
   Chair Person Signature Date

DEDICATION

This research project is dedicated to my family, particularly my mother; Eshet Tilahun and my father, Jemal Abaso. for all the support and encouragement; my sisters Dr. Dureti Jemal and Feven Jemal for their inspiration and for their constant guidance, support, and encouragement.

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List of Abbreviations

CM	Contract Monitoring
SOW	State of Work
ERA	Ethiopian Road Administration
RSDP	Road Sector Development program
KPI	Key Performance Indicator
ERAMS	Ethiopian roads Authority Management system)
SPSS	Statistical Package for Social Science

ABSTRACT

This research deals with the assessment of contract management practice and performance of Jigjig segag scheme road project. The aim of the study was to establish the effect of effective contract management practice on performance of Jigjig segag scheme road project. The specific objectives of the study were to identify determinants of effective contract management in Jigjig segag scheme road project; to assess the challenges involved in effective contract management practice in Jigjig segag scheme road project and to assess which contractual issue are managed properly .The research used a descriptive survey research design, and quantitative approach used with a target population of 45. It also employed a purposive method with a sample size of 45 populations. Data was collected using questionnaires, analyzed using SPSS and presented using charts and tables. The study findings from this sub topic revealed that employees under the age of 31-40 take majority share and individuals with BSc Degree are dominant employees of the organization. According to the study Jijiga – Segag scheme road project engaged in the effective contract management practices to a significant degree. According to the determinants of effective contract, the majority of respondents agreed that contract management involves setting appropriate strategic decisions and drafting of contracts, As to the challenges involved in contract management, the study discovered that most of the respondents agreed that difficulty in managing data in various locations hinders effective contract management in the project. The study also revealed that the majority of respondents rated their project performance as high, after implementing effective contract management.

Key words: ***contract management, performance, and Jigjig segag scheme road project.***

CHAPTER ONE

1. INTRODUCTION

1.1 Back ground of the study

Transport is essential for facilitating economic development in Ethiopia. Road transportation in particular gives people a way to move around, makes it possible to use land and natural resources, improves agricultural output and commercialization, gives people access to social services, and creates prospects for sustainable growth (ERA 2014).

"Ethiopian Roads Administration (ERA) is tasked with managing Ethiopian Roads' federal road network system. The purpose of the administration is to: "Provide safe, comfortable, and appropriate road infrastructure to support the socioeconomic development of the country and satisfy road users by: Improving condition of roads and expanding the road network. “In federal road construction projects, the contractor must finish the project on time, within a certain budget, and with a certain level of quality. When all of the project's objectives are met, we can say that the project is successfully completed and the enormous amount of the budget allocated to it was effectively utilized. The objectives of project management are to complete the project within the budgeted cost, allocated time, and with the specified quality (ERA 2014).

Contract Management is managing risk, and managing relationships. Simply a contract is a document describing a relationship between two parties, what each of them agrees to do, and who carries the risk if things don’t turn out as planned. “Contract Management is about managing that relationship, and those risks, to ensure that both parties get the result they originally wanted. Everything such as cash flow, revenue, obligations management, and all other areas around this, flow from this simple premise”.(International Association for Contract & Commercial Management, the IACCM.). “Contract” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance. “Contract Agreement” means the contract agreement referred to in Sub-Clause 1.6 (The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Contract

Agreement shall be based upon the form annexed to the Particular Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.) International. Federation of Consulting Engineers. The FIDIC (Federation international des ingenieurs conseils).Effective contract management has emerged as a crucial function to improve profitability, support compliance and manage risk in state corporations (Prosidian consulting, 2011).

According to Prosidian Consulting, findings of recent international surveys conducted by supply and demand chain executives on the complexities and risks of project contracts shows that there is a significant loss of money due to ineffective management of project contracts. For instance, research firm Aberdeen Group, has advocated that enterprises lose US$ 153 billion each year due to ineffective project contract management. A Green Point Global (2013) reveal that 60-80% of business transactions are governed by agreements or contracts and more than 10% of all executed contracts are lost. Although there are a lot of other variables which can influence the contractor's performance, this research will focus on the CM activities which have direct influence on performance outcome to the project deliverables, particularly on risk management, contractors' selection, CM team competence and roles, and purchasing-supplier relationship. It has not directly thought to cover the whole phases of procurement process, although some of the activities like CM plan, contract specifications and requirements, key performance indicators and performance outcomes will also be referred so that to provide better understanding from the reader. In our country perspectives 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 that need to be managed to properly administer projects to realize their main objectives of the project.

Contract management

Contract management, according to Kakwezi (2012), is the term used to describe the processes involved in handling contracts, such as soliciting bids, evaluating those bids, awarding and executing contracts, and measuring and calculating payments. This includes keeping track of linked contracts, managing pertinent problems, and incorporating critical contract amendments or adjustments. This is done to make sure that everyone involved in the contract goes above and beyond what is expected of them and works with the contractor to fulfill the goals set forth in the contract. In order to ensure that delivery is carried out properly, it also entails practical monitoring, administration, and evaluation of the terms of contract set through the procurement process, as noted by Uher and Davenport (2009). Activities related to contract management seek to ensure that parties abide by the terms and conditions of the agreement as well as to record and accept any necessary modifications to the contract's execution.

Since contract management is a process, there are specific tasks that must be completed in order to reap the benefits of it. Regular contract management procedures include managing the relationship with the contractor, contract administration, dispute resolution, and contract closing. The goal of contractor monitoring and acceptance management is to make sure the contractor is carrying out his responsibilities and meeting his commitments in accordance with the contract. Additionally, this aids the contracting authority in anticipating potential challenges or problems and providing prompt remedies. The contracting authority can make sure that all of its decisions and actions advance the supplier relationship by managing the contractor relationship. Contract administration, on the other hand, include keeping the contract in its most current form, regulating and managing contract modifications, paying the contractor, managing assets, generating reports, and terminating the contract. The management of all potential disputes between the two parties is a requirement of dispute resolution. Last but not least, a contract is considered closed when all conditions and duties have been met (Cropper, 2008)

Operational Performance

According to Blazey (2009), operational performance refers to how well a company performs in relation to guidelines or benchmarks for efficiency, effectiveness, environmental responsibility, productivity, regulatory compliance, and cycle time. He also shows that managers and

academics frequently utilize operational success as a dependent variable when comparing a given corporation to its competitors. For instance, the development of a company's human resources, marketing strategy, customer service, reputation or image, CSR, contract management, supplier connection, and communication can all affect operational success. The distinction between organizational performance and operational performance is shown by Combs, Crook, and Shook (2005).The trio adds that organizational performance includes a firm's economic results while operational performance includes all non-financial firm outcomes.

Additionally, the management system's pledges are tested against operational performance. To assure the accomplishment of the company's social, ecological, and economic goals, it serves as a gauge for the management plans. Performance is the documentation of the results attained as a result of a certain activity or body of work over a specific time period (Brandin & Russel, 2009). It is important to note that, in contrast to the past, many organizations now use a variety of performance measurements. An organizational management system can be used to manage operations successfully. Quality circles, balanced score cards, and best practices are a few of the often employed techniques for gauging operational success. These methods involve regular, repeated tasks that are utilized to set organizational goals. The activities are crucial for tracking a company's development in relation to its specified goals and objectives (Mohanty, 2008). Common KPIs for contract management include, but are not limited to: effectiveness, caliber, adaptability, compliance, supplier relationship, rates of supplier defects and procurement cycle time (Cho & Pucick, 2005).

1.2 Statement of the problem

Any organization that wants to improve value for money and obtain a competitive advantage must use effective contract management practices. A company's procurement procedure would be lacking without a strong and efficient contract management procedure. According to Cropper (2008), the process of ensuring that the contract's parties are following the terms of the agreement and completing their obligations is known as contract management. It also entails dealing with problems like errors, payments, specifications, policy specifications, and other modifications that might happen throughout the execution of the contract. In order to maximize financial and operational performance and reduce risks, contract management comprises a process of effective and methodical management of contract formation, implementation, and

analysis. In order to ensure that a company's overall strategic objectives are successfully and effectively accomplished, operational performance measurement is essential. A company's operational performance is enhanced through contract management, as evidenced by a variety of metrics, including quality, flexibility, speed, efficiency, and supplier relationships (Cho & Pucick, 2005).

Every year a major portion of government budget is allocated for procurement of infrastructure projects. Infrastructure include mainly road project. In Ethiopia, procurement of Road project has the lion portion of total budget. Also the Ethiopian road authority (ERA) spent over 53.3 billion birr, nearly quarter of the country‘s total budget on various projects, following Ethiopian policy to put the road sector among the top of its development priorities. This is a common problem that due to poor contract management, we fail to ensure purchasing roads in right quality, in right time at right price. As discussed in ERA (2014), most of the road construction projects are not completed within the contract time, budgeted cost, to the specified standard and it has been one of the major problems during realization of the goal stipulated on RSDP.

ERA (2021) evaluation of project shows that currently 207 projects are running in the administration and only 47% of the projects are passing the ERA 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.

Tadesse, Zakari, Zoubier, (2014, as cited in Zewudu, 2016 & Mengesha 2015) which argued that, the construction industry in Ethiopia, like in other developing countries, faces many challenges in its practice. Some of these challenges are project overruns, poor quality, inappropriate procurement systems, and a failure to cope with project requirements and the inability to adopt best practices. They further indicate that, the performance of construction projects against what was planned can be measured and evaluated using a large number of performance indicators that could be related to various dimensions (groups) such as time, cost, quality, client satisfaction, business performance and safety. They also stated that the

application of sound Project Management and Contract Administration practices provides construction project stakeholders with the means to meet their objectives.

This research identified the gap, giving the implementing agency ERA, Contractor and consultant during the construction of the jigjig segag road project on areas of improvement

1.3 Research Question

Based on the problem that has been stated the following research questions are developed.

- What are the major problems in contract management of Jigjig – Segag scheme project?
- What does the contract management practices and performance looks like in Jigjig segag scheme?
- How effective is the contract management practice and performance in Jigjig segag scheme?

1.4 Objective of the study

1.4.1 General objective

The general objective of the study is to assess the Contract Management Practices and performance of Jigjig - Segag scheme in ERA Projects in the implementation stage of the project's life cycle.

1.4.2 Specific objective

The specific objectives of the study are;

- To assess the contract management practice and performance in the implementation phase of the Jigjig- Segag project.
- To identify determinants of effective contract management practice in Jigjig - segag scheme road project.
- To assess which contractual issues are managed properly.

1.5 Significance of the study

Major portion of government budget is allocated for procurement of infrastructure projects. 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.

1.6 Scope of the study (geographical, time and content scope)

In this research attempt is made to assess the contract management practice and performance 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 and my research will focus only on Jigjig - Segag scheme. 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 Operational Definitions

1. **Parties in Road Construction:** for this research the parties involved in road projects are the client; Ethiopian Roads Authority (ERA), the contractors and the consultant. Other stakeholders like financers, local peoples, and regulatory authorities are excluded to narrow the focus of the study to the main stakeholders.
2. **Client:** is the person or company with controlling interest in the project and for whom the work is carried out.
3. **Consultant:** collaborate with client and contribute their operational, strategic, or technical expertise to projects
4. **Contractor:** a person or firm that undertake a contract to provide material or labour to perform a service.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 **Introduction**

This chapter contains a review some of the literature; theoretical review relating to construction contract, contract management, contract management life cycle, contract management practices; determinants of effective contract management; challenges in practicing contract management; contract management and performance; conceptual framework; empirical review; as well as synthesis of the literature review**.**

2.2 Theoretical review

2.2.1 Construction Contract

Construction contracts are a set of written terms that cover things like progress payments, the schedule for the project, changes, etc. For various sorts of contracts, many organizations have released their own set of standard general conditions of contract. They are occasionally released with the intention of making money off the sale of copies and the licensing of their use. They may also be published by a group with the goal of preserving the interests of its members by transferring risk from members to their clients or by the principal with the goal of transferring risk to contractors. The impartiality, drafting quality, and topics covered of general contract clauses vary widely (Uher & Davenpont, 2009)

According to Ethiopian Civil Code Article 2610, a construction contract is a work and labor agreement in which one party, the contractor, agrees to carry out a certain task under his supervision in exchange for payment from the other party, the client. Additionally, Article 2876 stated that a contract in which one party agrees to deliver to the other party a house, an apartment, or another building that has not yet been constructed is a contract for work and labor connected to immovable property and not a contract for sale. A kind of standard conditions of contract for works of civil engineering construction was produced by the International Federation of Consulting Engineers (FIDIC) in the late 1950s.They were created to be utilized in global initiatives.

2.2.2 Contract management

Contract management, as defined by University of Texas (2017), consists of seven (7) general processes, including planning, performance monitoring, change management, payment approval, dispute resolution, termination, and contract close-out. Verifying contractor performance for payment purposes; identifying any material breaches of the contract by comparing actual performance to requirements; deciding whether corrective action is necessary and taking action, if necessary; and developing a completion plan for contractor exit requirements, such as acceptance of the goods/services, final payment, and contract completion, are among the main tasks of contract administration.

ERA has a system called ERAMS (Ethiopian roads Authority Management system), which is a tool mounted on a computer server in ERA Data Centre and accessed through either the Intranet or Internet over a secure website. The main objectives of the system is to assist in management of project Contracts from junior Project Engineers administrating contracts through executive chain reporting to the Director General of the authority (ERA, 2018). The main function of the system is to access reliable information of the projects to the contract administrator and managements. It is a key to reporting performance of contracts, contractors and consultants from the detail design stage through to completion of the works. The system has four main function and discussed below

- It provide management information from a single source enabling better management responsibility and accountability giving better assurance in budget allocation by validating estimates through the Estimate Validation System (EVS) (ERA, 2018).
- More efficient and better scrutiny of Works and Maintenance Contract Bids by analyzing bids through the Tender Analysis System (TAS) which allows delegated individuals the ability to analyze bidder‘s rates comparing them to the Engineer‘s Estimate and anyone of the other bidders bid which will assist in identifying inconsistent rates which may highlight misinterpretation or error in the Bill of Quantities that can be addressed before contracts are signed, identifying potential over or exceptional underpricing and Providing historical rates for validation of estimates through Estimate validation system (ERA, 2018).

- Monitoring progress of construction and maintenance works through the Works Monitoring System (WMS) allowing Regular monitoring of physical and financial progress, A focus on end costs, and anticipated completion dates with the reasons for overspend and delays that can be addressed on future contracts, Analysis of common features leading to increase costs and delayed delivery (ERA, 2018).
- Improving performance of Contractors and Consultants through the Performance Appraisal System (PAS); provides a simple input for Performance Monitoring identifying the need for Consultants, Contractors and ERA to improve their performance during contracts and Provides a simple input for Performance Evaluation to grade overall performance of Contractors and Consultants giving ERA the opportunity to improve its selection system (ERA, 2018)

2.2.3 Contract management life cycle

The Contract Management Standard TM [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 client and contractor are actively involved in contract administration to ensure satisfactory performance and to bring the contract to a successful conclusion

Client duty include: Contract performance, Invoicing, Engaging in subcontracting activities, Managing contract changes, and Bringing the contract to a successful conclusion. Contractor duty 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. 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

2.2.4 Contract Management Practices

In general contract is the central element of every project activity. As Lowe (2013) reinforced that, a contract is the foundation of the institution and renovation of a favorable relationship between the contractor and contracting authority. It additionally types a basis for the acceptance of the project deliverables consequently making sure the fulfillment of cost for money. If a contract fails to tackle the relevant troubles required in the agreement, such as, word ambiguities, it becomes hard for the contracting company to base a nice working relationship with the contractor. In spite of that, virtually there are activities that the contracting company can elevate out upon awarding a contract so as to boost the contractor's overall performance and subsequently the effectiveness for the duration of the contract implementation. The foremost approaches in contract management worried in all types of contracts are discussed as follows:

Contract management starts with contractor monitoring and acceptance management. This is vital in enabling the contracting organization to ascertain that the contractor is undertaking his duties and fulfilling his obligations in compliance with the contract. This also allows the contracting organization to pinpoint any issues or problems in advance that could arise and offer timely solutions. Particularly, the outline of contractor monitoring and acceptance management includes: monitoring, controlling, and evaluating the contractor's performance; evaluating the quantity and quality of services, works, or products delivered; and identifying and handling risks
(Cropper, 2008).

Secondly, contract management involves managing the contractor relationship. Hansson and Longva (2014) argue that this refers to the actions and initiatives of the contracting company to create and maintain a positive relationship with the contractor. This depends on the mutual trust, understanding, regular communication and timely management of possible problems in the contract. Thirdly, the practice includes contract administration. This procedure involves

maintaining an updated form of the contract; controlling and managing contract variations; paying the contractor; managing assets; drafting reports; and terminating the contract (Piga & Treumer, 2013).

Dispute resolution is the fourth activity involved in contract management. Camén, Gottfridsson and Rundh (2012) posit that this involves the procedures undertaken when selecting and applying the optimum way of resolving differences with the contractor. The final activity of contract management is contract closure. This entails the control and certification practices that both contracting parties have honored their contractual responsibilities as well as activities involved in evaluating degree of successful contract execution and achievement of expected results (Chong, Balamuralithara & Chong, 2011).

2.2.5 Determinants of Effective Contract Management

Sanghera (2008) says that a company can decide if it is engaging in effective contract management if it make fantastic strategic decisions and drafts proper contracts. A contract is the pillar in the workout of its appropriate and effective management. Every contract should establish its basic principles, have clear scope, define execution phrases and define procedure vital for successful communication between the contractor and contracting authority. It also implement changes, evaluate contractor performance, be given or reject the contractor's deliverables, become aware of and manage risks, manage problems, resolve disputes, approve payments, and sooner or later close the contract method.

Effective contract management is also characterized by a contract management team that has the necessary relevant qualifications, skills, knowledge and experiences for the job. It is also vital to clearly specify the roles and competencies involved in the contract management process. The officials charged with the responsibility should be selected based on objective criteria so as to ensure they have the required technical knowledge as well as skills, such as, negotiation skills, cooperation skills, and communication skills (Uher & Davenport, 2009). Pollitt and Talbot (2004) argue that a contracting authority can also be said to be effectively managing its contracts if it monitors its contractors' performance well. The contracting authority should monitor and

continually evaluate the contractor's performance so as to ensure the final output achieves the greatest value for money (Hill, 2008).

Additionally, flexibility or adaptability is another determinant of an effective contract management process. A contracting organization and a contractor must be flexible in order to manage change successfully. This is crucial for both parties because need for change might arise during project implementation. Change happens due to institutional changes, technological developments, as well economic factors. Successful contract management happens when both parties are willing to accept and adapt to change (Wysocki, 2009). As Greve (2008) points out, organizations that achieve success in contract management ensure that they formulate a 'win-win' situation for both the contracting authority and contractor. This should be applicable during
contract implementation. There is also a need to focus on the development and maintenance of good cooperation and communication between the parties. Timely response to possible issues and dispute resolution is also indispensable.

Finally, for contract management to be successful, the parties need to take initiatives and preventive actions. This implies that the process should be based on preventive actions with anything relating to potential risks, substandard contractor performance, supply or delivery of low quality products or services. They should avoid activities of suppressive nature (Benjamin & Belluck, 2001; National Audit Office, 2012).

2.2.6 Challenges in Practicing Contract Management

First, contract managers experience a challenge regarding unforeseen work. This implies that contract management may result in work that is contrary to the contract terms and conditions. Therefore, it is essential for an organization to define its expectations clearly in the contract. The business requirements should be well documented and that people at all organizational levels andend users should be involved in the development of the requirements and documenting them in the SOW (Young, 2008). Moreover, budget or timeline constraints hamper effective contract management. Angeles and Nath (2007) reveal that contract managersoften face this challengedue to unclear project scope, and unrealistic timeline and

budgets. Thus, to salvage this challenge, it is important to have clearly defined scope, budget, and timeline for the contract.

Choy, Chow, Lee and Chan (2007) state that conflicts regarding payments hinders an organization from practicing proper contract management. To solve this, it is necessary to define ways and processes in the contract to penalize or award on the basis of compliance with the agreement. It is also significant to devise ways of measuring progress and set actual acceptance standards. Panesar and Markeset (2008) also point out that change can be challenging to a contract management team especially if it lacks appropriate measures of handling it. Contract management challenges include lack of cooperation and inflexibility

As Schiavo-Campo and McFerson (2008) state, contract managers also face a challenge when tracking global contracts. This affects organizations that operate internationally or award contracts to both local and global companies. Various factors including language difference and unique business techniques may complicate global contracts and making it hard for the parties to understand each other. To solve this, it is necessary to specify a common language to use in thecontract to facilitate clear understanding.

Managing data in diverse locations can make it hard to locate and relate documents to each other. This may cause problems if there is need to review many documents regarding a specific contract, or review various versions of the document, and they are separate. Therefore, organizations need to establish central data management systems to facilitate effective contract management Choy, Chow, Lee and Chan (2007).

2.2.7 Operational Performance

Blazey (2009) states that operational performance entails an organization's performance in relation to standards or prescribed measures of efficiency, effectiveness, environmental responsibility comprising of waste reduction, productivity, regulatory compliance, and cycle time. He further demonstrates that operational performance is a normal dependent variable that managers and researchers use in evaluating specific firms in comparison with their business rivals. For instance, operational performance can be dependent on a firm's factors, such as, human resources development, marketing strategy, customer service, image or reputation, corporate social responsibility, contract management, supplier relationship, and communication.

Combs, Crook and Shook (2005), demonstrate the difference between the operational performance and organizational performance. The trio further argues that operational comprises of the economic outcomes of a firm. Besides, operational performance testing happens against the commitments established in the management system. It serves to measure the firm's management plans to ensure the achievement of its social, ecological, and economical goals.

2.4 Empirical studies

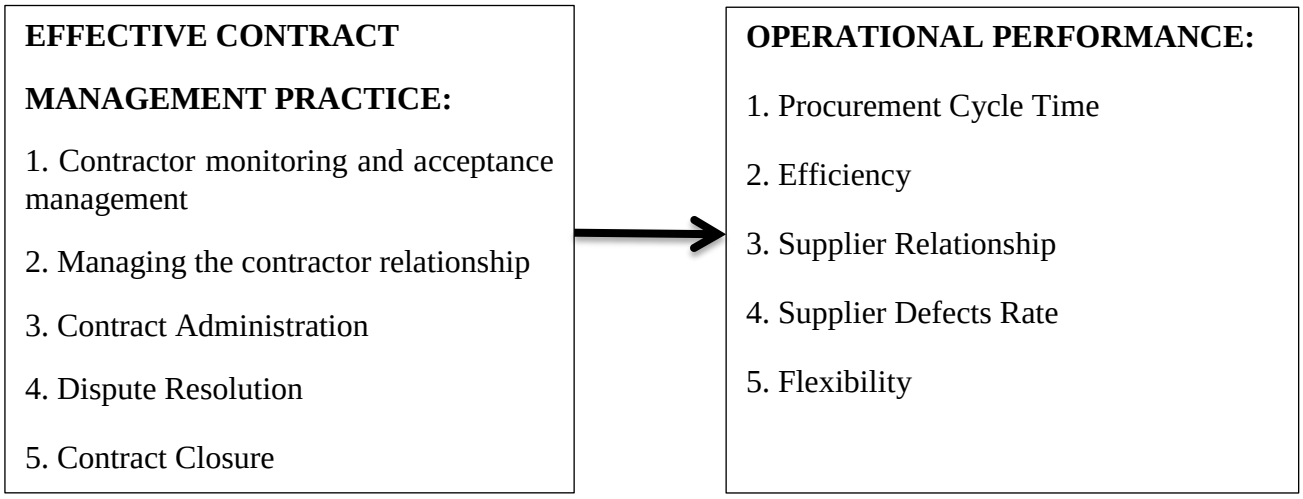
There are various studies conducted globally, Africa and in Ethiopia relating to contract management where complete study could not be found, rather the various aspects of the contract management had been studied and the relevant issues are reviewed and presented here. Abebe N. (2015) found out that 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 programs submitted are not adequate and attributing to the project delays and cost overrun

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. 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 managing this varied work has paramount impact on the project. The same has been confirmed by Temegen (2015) that variations are common road construction project during implementation.

2.3 Conceptual Framework

In this research, the framework comprises of the dependent and independent variables, which are operational performance and contract management practice, respectively. Independent variable is divided into five independent variables including contractor monitoring and acceptance management; managing the contractor relationship; contract administration; dispute resolution; and contract closure. The conceptual framework shows how effective contract

management affects operational performance of an organization. This is determined by the operational key performance indicators including procurement cycle time, efficiency, supplier relationship, supplier defects rate, and flexibility



CHAPTER THREE

3. RESEARCH METHOLODOLOGY

Introduction:

This chapter discusses the research designs, population, and sample size, sampling procedure and data collection instruments that were employed in the study.

3.1 Research design

This research is a descriptive research. It tries to assess the contract management practice on the Jigjig - Segag road projects and measures current practice in terms of submission, approval and implementation using questioner. Descriptive study was chosen by the researcher because it offers a clear, well description of the Contract Management activity. 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 Study Population

The target population of this study was made up of the officials from ERA East region, consultant (client representative), and contractors who have direct relation with contract administration of project which in the researcher's opinion have the information relevant to the study. The elements in the population are units of analysis and their nature were determined by the objectives.

3.3 Determination of Sample Size

Since the target population is small, all the populations that have a relation with the contract administration were taken using purposive sampling method for the research and the representation is 100%. In Jigjig – Segag scheme road project there are four lots of project. The

first lot is Jigjig to gelelesh 50km road project; it has one contractor and consultant, the next scheme has two lots from gelelesh to dega amedo 100km road project with one contractor and consultant and the last lot is stating from dega amedo to segag 54km and which also have one contractor and consultant. There is one client for the four lots which is ERA. Totally from ERA East region directorate six respondent where taken and from consultant 21 respondents were taken, and from contractor 18 respondents were taken. Making total respondents 45.

3.4 Sampling techniques and procedure

The researcher used purposive sampling and divided the total population who work in Jigjig – Segag scheme project into two group; personnel's who have a contact with the contract agreement and who have not. So the researcher selected the group who have a contact with the contract agreement and took all selected personnel's as study population.

3.5 Data collection methods

Both primary and secondary sources were used during the study. The primary data was collected by the use of well-structured questionnaires which were administered to the different respondents. For secondary data, the researcher used professional journals, newspapers, textbooks, magazines, and works done by researchers

3.6 Data Collection instruments

The study employs questionnaires. It consisted of inter-related questions designed specifically to establish the impact of contract management practices on the performance of jigjiga-segeg scheme project. Self-administered questions were used containing both open ended and closed ended questions. Interview method will also supplement questionnaires. The researcher will also engage some respondents in face to face discussions. This method will serve to extract additional information where there is a conflict or bias. It may also be used in circumstances where the respondents claim not to be having enough time to answer the questionnaires.

3.7 Validity and reliability

Reliability

Reliability refers to the extent to which the 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 Alpha was 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. According to William and Barry (2010) the Alpha value 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. scales exhibiting a coefficient alpha:

a. 0.91 - 1 Excellent

b. 0.81 – 0.9 Good

c. 0.71 – 0.8 Good and Acceptable

d. 0.6 – 0.7 Acceptable

e. 0.01 – 0.6 Non acceptable or have poor reliability

Accordingly, the Cronbach's Alpha values of the survey 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	Contractor monitoring and acceptance management	0.741	5
2	Contractor relationship management	0.715	5
3	Contract administration	0.700	5
4	Dispute resolution	0.691	3
5	Contract closure	0.710	4
6	Determinants of effective contract management	0.815	9
7	Challenges involved in contract management	0.706	8
8	Performance	0.761	5

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.

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 questioner 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.

3.8 procedure of Data collection

Questionnaires were distributed to respondents with brief orientation on how respondents use their perceptions and thoughts to answer questions. The survey pack included a copy of the cover letter with 9ki6brief introduction on questions.

3.9 Data analysis

To best meet the objective of the study Summary of statistics was organized both in the form of qualitative and quantitative measures by using frequencies and percentage. The questioner is designed in a structured way and Likert scale indicating measurement used on the basis of survey 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

Responses of the questionnaire are summarized and presented making use of SPSS software version 25. Though the sample size is 45, 45 questioners were distributed assuming a response rate of 94%. The questionnaires were distributed for engineers that are involved in contract administration. So 42 questioners were collected out of 45 questioners.

Analysis based on Questionnaire Responses

Based on questionnaire response on these parameter primary data‘s were collected by using likert scale questionnaires (1-Strongly Disagree, 2- Disagree, 3-Neutral, 4-Agree, 5- Strongly Agree) and the analyzed as follows. The mean values which are driven from the 5 point likert scale can be rated and categorized as follows.

1) - O >= 1.80 indicates strongly disagree.

2) - 1.8 >= 2.6 indicated disagree

3) - 2.6 >= 3.4 indicates neutral

4) - 3.4 >=4.2 indicates agree

5) - 4.2 >=5.0 indicates strongly agree

Based on the criteria above the researcher evaluated the effectiveness of the contract management practice and performance of Jigjig - Segag scheme road project. Tables shows analyses of the data collected, who have direct relation with the contract administration practice and their response is coded and extracted in the SPSS Version 25 software .So, tables indicates the descriptive statistics results to evaluate the effectiveness of contract management practice.

CHAPTER FOUR

4. DATA PRESENTATION, RESULT AND DISCUSSION

4.1 Introduction

This chapter identify the data findings on the contract management practice and performance of road construction project; the case of Jigjig - Segag scheme project. The research sample size is 45 respondents were the 45 questioners distributed a total of 42 questioners were returned back and the analysis is conducted on those. The study used a Likert scale to collect and analyze data. Frequencies were used to analyze data on single response questions. Finally, the data was presented using tables and charts.

4.2 General Information

The study looks for Demographic characteristics of Respondents on the age of the respondents, the sex of the respondents, and educational level of the respondents, position and experience of the respondents. The information was notable in testing the suitability of the respondents' ability to answer the questions on contract management practice and performance of Jigjig-segag project.

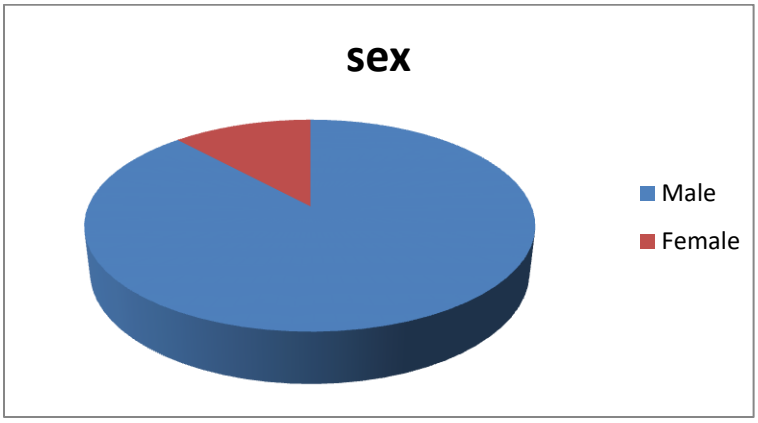
4.2.1 Sex of the respondents

Table 4.1 Classification of the Respondent based on sex

Description		Frequency	Percent
Sex	Male	37	88.1
	Female	5	11.9
	Total	42	100.0

This section classifies respondent based on their gender category. Based on the Table 4.1, out of the total respondent, (88.1%) of the respondent are males and the rest (11.9%) are females.

Figure 1: Respondents Sex



4.2.2 Age of the respondents

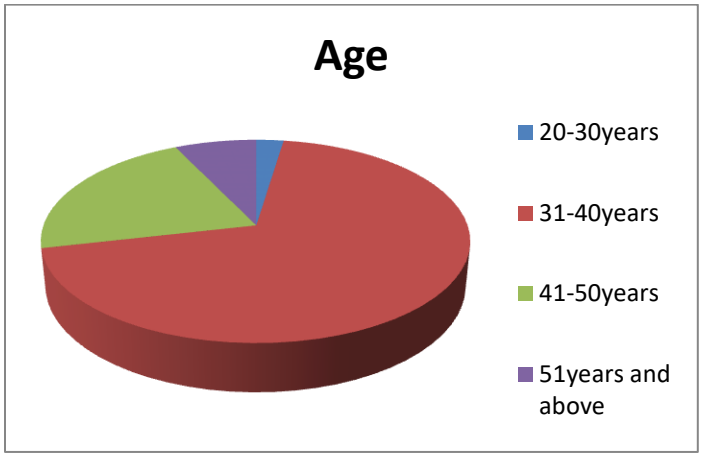
Table 4.2 Classification of the Respondent based on Age

Description		Frequency	Percent
Age	20-30years	1	2.4
	31-40years	29	69.0
	41-50years	9	21.4
	51years and above	3	7.1
	Total	42	100.0

This section classifies respondent based on their Age category. Based on the Table 4.2, about 2.4 % of the respondents are under the age category of 20-30 years inclusive, 69% of the respondents are under the age category of 31-40 years inclusive, 21.4% are under the age of 41-

50 and the rest 7.1% of them are more than the age of 50 years. These showed employees between the ages of 31-40 years take the major portion in the personal.

Figure 2 : Respondents Age



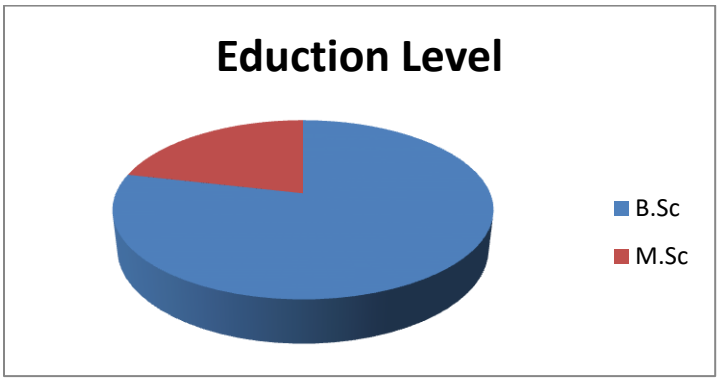
4.2.3 Educational back ground of the respondents

Table 4.3 Classification of the Respondent based on Educational back ground

Discription		Frequency	Percent
Education	B.Sc	33	78.6
	M.Sc	9	21.4
	Total	42	100.0

Educational background helps to show how that the data was collected from the respondents who have better skill of the construction industry and helps in the clarity of the response. As per the table 4.3, about 78.6 % of them are B.Sc degree holders and the rest 21.4% are Masters Holder. This implies that degree holders are the leading employees in the personel.

Figure 3 : Education back ground of respondent



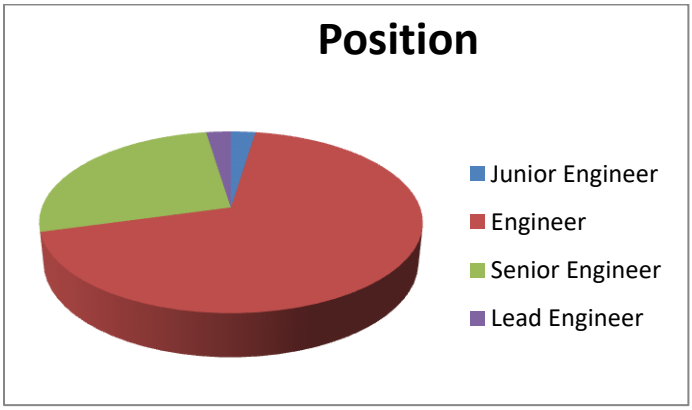
4.2.4 Work position of the respondents

Table 4.4 Classification of respondents based on their Work position

Description		Frequency	Percent
Position	Junior Engineer	1	2.4
	Engineer	28	66.7
	Senior Engineer	11	26.2
	Lead Engineer	1	2.4
	Team Leader	1	2.4
	Total	**42**	**100.0**

Regarding the position of the respondents, Table- 4.4 above indicates that, 2.4 % of them are Junior Engineer, 66.7% of them are Engineer, 26.2 % are senior Engineer, 2.4% are Lead Engineer, and 2.4% are Team Leaders.

Figure 4 : Respondents position



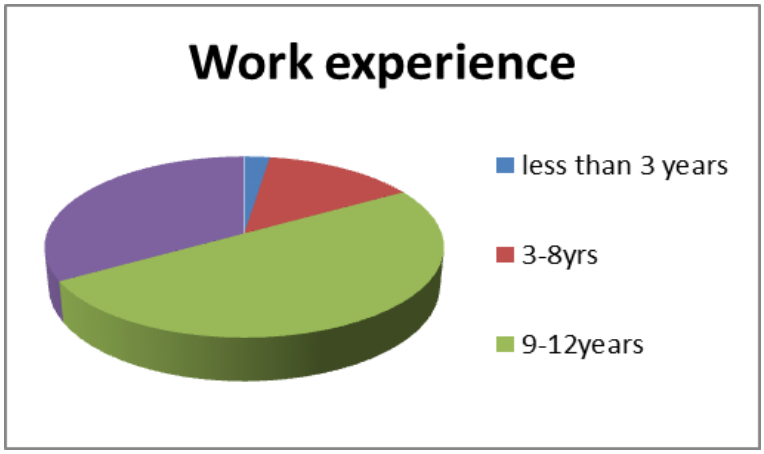
4.2.5 Work Experience of the respondents

Table 4.5 Classification of respondents based on their Work Experience

Discription		Frequency	Percent
Experience	Less than 3years	1	2.4
	3-8yrs	6	14.3
	9-12years	21	50.0
	more than 12years	14	33.3
	Total	42	100.0

Based on the data on Table 4.5, 2.4% of the respondents have an experience of less than 3years, 14.3% have an experience of 3 to 8 years, and 50% of them have 9 to 12 years of experience and 33.3 % have an experience of more than 12 years. This shows employees between work experiences of 9-12 years take the major part.

Figure 5: Respondents Work Experience



4.3 Effective Contract Management Practice

The study's first objective was to establish the extent to which Jijiga Segag road project practice contract management. The data collection instrument, questionnaire, of the study has measures of effective contract management. The contract management practices were measured using a 5-point Likert scale where; 1=Strongly Disagree; 2=Disagree; 3=Not Sure;4=Agree; 5=Strongly Agree.

4.3.1 Contractor Monitoring and Acceptance Management

Table 4.6 Contractor Monitoring and Acceptance Management

Descriptive Statistics

Description	N	Mean	Std. Deviation
The contractor performs his commitments and executes his duties as required by the contract	42	3.14	0.751
The client can identify any challenges or problems and provide timely solution.	42	2.57	0.501
The client monitor, regulates, and assesses the contractor's performance.	42	3.26	0.665
The client recognizes and responds to risks.	42	3.26	0.627
The consultant evaluation of the progress the project is usually fair and unbiased	42	3.24	0.656

Regarding monitoring and acceptance management of the project most of the respondent as shown above believe neutral to their projects ensured that the contractor undertook his duties and fulfilled his obligations in Compliance with the contract (M=3.14); the client monitored, regulates, and assesses the contractor's performance (M=3.26); client recognize and handled risks (M=3.26) and the consultant evaluation of the progress the project is usually fair and unbiased (M=3.24). On the other hand, most of the respondents disagree to that the client could identify any challenge or Problems and provide timely solutions (M=2.57).

4.3.2 Contractor Relationship Management

Table 4.7 Contractor Relationship Management

Descriptive Statistics

Descriptive	N	Mean	Std. Deviation
The client establishes and sustains a good working relationship with the contractor	42	3.47	0.841
The client and the contractor have mutual trust.	42	4.10	0.726
The client and the contractors share a common understanding.	42	3.57	0.801
Regular communication between the contractor, consultant and client	42	3.53	0.687
There is timely management of possible problems in the contract	42	3.54	0.742

Results the table above, most of the respondents agreed to the client establishes and sustains a good working relationship with the contractor (M=3.47); that there was mutual trust between client and the contractors (M=4.10) and that there was mutual understanding between the client and the contractors (3.57). Respondents agreed to regular communication between the organizations and contractors (M=3.53) and that there was timely management of possible problems in the contract (M=3.54).

4.3.3 Contract Administration

Table 4.8 Contract Administration

Descriptive Statistics

Descriptive	N	Mean	Std. Deviation
The client has an updated form of contract agreement.	42	4.05	0.731
Contract variants are managed and under control by the client.	42	3.71	0.944
The contractor is paid on time	42	2.32	0.912
The assets are managed properly.	42	3.60	0.665
The consultant frequently creates reports	42	4.05	0.582

Results the table above, most of the respondents agreed to the client has an updated form of contract agreement (M=4.05); contract variants managed and under control by the client (M=3.71); the assets are managed properly (M=3.6); consultants regularly drafted reports (M=4.05) and disagreed to the contractor is paid on time (M=2.32);

4.3.4 Dispute Resolution

Table 4.9 Dispute Resolution

Description	N	Mean	Std. Deviation
The client Utilizes the proper procedure to settle any potential disputes with the contractor	42	3.51	0.828
The client secure that each individual is free to express its concerns	42	3.17	0.660
Both the client and the contractor are in a position to benefit.	42	4.10	0.484

Results the table above, most of the respondents agreed to the client utilizes the proper procedure to settle any potential disputes with the contractor (M=3.51); the client secure that each individual is free to express its concerns (M=3.17) and that both the client and the contractor are in a position to benefit (M=4.10).

4.3.5 Contract Closure

Table 4.10 Contract Closure

Descriptive Statistics

Description	N	Mean	Std. Deviation
The client control and certifies to the compliance of both contracting parties with their obligations.	42	3.98	0.643
The client oversees and accredits the processes used to evaluate how successfully a contract is executed.	42	3.52	0.671
The client guarantees the accomplishment of expected results.	42	3.83	0.490
The client successfully ends or terminates contracts.	42	3.40	0.734

Results the table above, most of the respondents agreed to that the client control and certifies to the compliance of both contracting parties with their obligations (M=3.98); the client oversees and accredits the processes used to evaluate how successfully a contract is executed (M=3.52). The client guarantees the accomplishment of expected results (M=3.83) and The client successfully ends or terminates contracts (M=3.40) and gaining of expected results.

4.4 Determinants of Effective Contract Management in the Jigjiga-Segag Scheme road project

This section of the questionnaire sought to find out the determinants of effective contract management in the state corporations using a 5-point Likert Scale ranging from 1=Strongly Disagree; 2=Disagree; 3=Not Sure; 4=Agree; 5=Strongly Agree.

Table 4.11 Determinants of Effective Contract Management in the Jijiga- segag scheme road project

Descriptive Statistics

Discription	N	Mean	Std. Deviation
The appropriate strategic decisions are made, and the right contracts are drafted.	42	3.83	0.490
Effective evaluation techniques exist.	42	3.45	0.853
The contract management staff is equipped with the appropriate job-specific training, expertise, knowledge, and experience.	42	3.83	0.621
Performance of contractors is effectively managed	42	2.90	0.617
creates a situation where both parties benefit (organization and the contractor)	42	3.95	0.731
Ensures provision for modification (flexible or adaptable)	42	3.74	0.665
Processes and contract management plans are well described.	42	3.93	0.513
Parties behave independently and proactively.	42	3.21	0.951
Has exact definition of roles	42	4.02	0.412

Results the table above, most of the respondents agreed that had appropriate strategic decisions are made and the right contracts are drafted (M=3.83); had effective evaluation techniques

(M=3.45); The contract management staff is equipped with the appropriate job-specific training, expertise, knowledge, and experience (M=3.83); creates a situation where both parties benefit (organization and the contractor) (3.95); Processes and contract management plans are well described (M=3.93); that both parties behave independently and proactively (M=3.21); had precise definition of roles (M=4.02) and On contrast, most of the respondents neutral that their organizations Performance of contractors is effectively managed formulated a win-win situation for both parties (M=2.90);

4.5 Challenges involved in Contract Management Practice

The section of the study aimed at identifying challenges affecting effective contract management practice in the state corporations. This was done using a five-point Likert scale ranging from 1=Strongly Disagree; 2=Disagree; 3=Not Sure; 4=Agree; 5=Strongly Agree.

Table 4.12 Challenges in Contract Management in Jijiga –Segag road project

Descriptive Statistics

Discription	N	Mean	Std. Deviation
The ability to manage contracts effectively is hampered by unclear project scope.	42	3.86	0.472
Effective contract management practices are hindered by unrealistic timelines and budgets.	42	4.19	0.397
Corruption hampers the implementation of contract management successfully.	42	4.14	0.354
Flexibility is important for good contract management procedures.	42	3.74	0.767
Payment disputes get in the way of effective contract management procedures.	42	3.86	0.751

Effective contract management techniques are constrained by a lack of cooperation	42	3.83	0.537
The inability to manage data across several locations can cause successful contract management practices to fail.	42	3.74	0.445
Proper contract management procedures are limited by inadequate ICT use.	42	3.43	0.737

Results the table above, most of the respondents agreed to the following as challenges to effective contract management practice in their projects: The ability to manage contracts effectively is hampered by unclear project scope. (M=3.86); Effective contract management practices are hindered by unrealistic timelines and budgets. (M=4.19); Corruption hampers the implementation of contract management successfully. (M=4.14); Flexibility is important for good contract management procedures (M=3.74); Payment disputes get in the way of effective contract management procedures. (3.86); Effective contract management techniques are constrained by a lack of cooperation (M=3.83); the inability to manage data across several locations can cause successful contract management practices to fail. (M=3.74); Proper contract management procedures are limited by inadequate ICT use (M=3.43).

4.6 Performance

The study focused at establishing the assessment of effective contract management on Jijiga – Segag scheme road project performance. The questionnaire need the respondents to rate their companies performance on the basis of the predetermined performance indicators including organization-supplier relationship, procurement cycle time, supplier defect rate, efficiency, flexibility. It used a five-point Likert scale in which 1=Very Low; 2=Low; 3=Average; 4=High; 5=Very High.

Table 4.13 Performance

Descriptive Statistics

Description	N	Mean	Std. Deviation
How do you rate the organization's Procurement Cycle Time (Speed)?	42	3.29	0.774
How effective is your organization as a whole?	42	3.60	0.497
How the client relationships do with its contractor?	42	3.69	0.468
How flexible is the organization?	42	3.45	0.705
How would you evaluate the contractor's faults rate for your organization?	42	3.12	6.016

Results the table above, most of the respondents rated their organizations Performance upon the implementation of contract management practice as high in relation to flexibility (M=3.45), effectiveness (3.60) and client relationship with its contractor (M=3.69); the respondents rated their organizations performance as high in relation to procurement cycle time (M=3.29). In terms of the evaluation of the contractor's faults rate for your organization the majority of the respondents rated their organizations as neutral (M=3.12). Hence, the study concurs with Blazey(2009) that effective contract management improves operational performance of as measured by quality, flexibility, speed, supplier relationship, supplier defect rate and efficiency.

Discusion

This section discusses the results of the desk study as well as the questionnaire survey. Based on the information collected from the respondents, the impact of contract management on contractual compliance, monitoring and assessment, claims and dispute administration, payment process administration, management of change, and contract close out is explored. Additionally, the difficulties, benefits, and advantages of the contract management approach in the construction of the Ethiopian Federal Road are also examined.

According to the literature review, careful adherence to contractual obligations is essential for effective contract management. This study evaluates the contractual compliances of the insurances and securities, work schedule, and reporting requirements based on the contract documents used in federal road projects in Ethiopia. The results concur with Cropper (2008) that effective contractor monitoring and acceptance management involves a contractor undertaking his duties and fulfilling his obligations in compliance with the contract; identification of any issues or problems in advance that could arise and offer timely solutions; monitoring, controlling and evaluating the contractor's performance; identification and handling of risks as well as evaluating the quantity and quality of services, works, or products delivered.

These findings agree with Hansson and Longva (2014) that effective contract relationship management involves creation and maintenance a positive relationship with the contractor; ensuring mutual trust between the organization and the contractor; ensuring mutual understanding between the organization and the contractors; regular, The study findings agreed to Cmén, Gottfridsson and Rundh (2012) who argue that proper contract administration entails maintenance an updated form of the contract; controlling and management of contract variations; paying the contractor on time; regularly drafting reports and proper management of assets and good dispute resolution entails the client Utilizes the proper procedure to settle any potential disputes with the contractor, allowing each party to freely express its concerns, as well as secured a win-win situation for both parties. These results agree with Chong, Balamuralithara and Chong (2011) that contract closure should involve controlling and certifying that all parties have honored their contractual responsibilities; controlling and certifying that all activities of

evaluation of successful contract execution; ensuring the achievement of expected results; and termination of contracts effectively.

In the determinants of effective contract management the study findings agree with Uher & Davenport (2009) and Sanghera (2008) that effective contract management is determined by use of highly skilled and experienced professionals; effective evaluation procedures; clear description of processes and contract management plans; precise definition of roles; well management of contractor's performance; win-win situation for both parties; strategic decisions and right contracts; taking preventive actions and provision for changes (flexibility). According to challenge the study confirms that the most common challenges involved in contract management include corruption, unrealistic budgets and timelines, insufficient ICT, lack of cooperation, payment conflicts and unclear project scope (Choy, et al., 2007; Panesar & Markeset, 2008).

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter plans to summarize the research findings, conclusion and suggest recommendations in relation to effective contract management practice and performance in Jijiga-Segag scheme road project. The leading aim of these analyses is to answer the research questions. To attain these objectives, spss analyses methods were applied to the data using descriptive statistics.

5.2 Summary of the Research Findings

In the first subtopics demographic characteristics of the respondents take in employees' gender, age, educational level, work experience and position. Results from this sub topic revealed that employees under the age of 31-40 take majority share and individuals with BSc Degree are dominant employees of the organization.

According to the study Jigjig – Segag scheme road project engaged in the effective contract management practices to a significant degree. These activities include contractor monitoring and acceptance management, contractor relationship management, contract administration, dispute resolution, and contract closure. This demonstrates that in order to improve their performance, the majority of Jigjig- segag road project has embraced the concept of contract management in their procurement process.

According to the determinants of effective contract management in Jigjig – Segag scheme road project, the majority of respondents agree that contract management involves setting appropriate strategic decisions and drafting of contracts; use of effective evaluation procedures; employing contract management team with relevant skills, qualifications, knowledge, and experience; good management of contractor's performance; formulation of a win-win situation for both parties; provision form implementation of change; clear description of processes and contract management plans; definition of roles precisely; and taking initiatives and preventive actions.

As to the challenges involved in contract management, the study discovered that most of the respondents agreed that unclear project scope; unrealistic timeline and budgets; corruption; inflexibility; payment conflicts; lack of cooperation; and insufficient use of ICT hampers effective contract management. Most of the respondents agreed that difficulty in managing data in various locations hinders effective contract management in the project.

The study also revealed that the majority of respondents rated their project performance as high, after implementing effective contract management, in terms of procurement cycle, flexibility, efficiency, and contractor relationship.

5.3 Conclusion

According to the findings, Jigjig - segag scheme road project practice good contract management. The objective of the research is to assess the contract management practice and performance in Jigjiga -segag road construction projects, the researcher identified by the fact that they engage in contract management practices: contractor monitoring and acceptance management, contractor relationship management, contract administration, dispute resolution, and contract closure. Additionally, most of the jigjiga - segag road project agree that measures of effective contract management include setting appropriate strategic decisions and drafting of contracts; use of effective evaluation procedures; employing contract management team with relevant skills, qualifications, knowledge, and experience; good management of contractor's performance; formulation of a win-win situation for both parties; provision form implementation of change; clear description of processes and contract management plans; definition of roles precisely; and taking initiatives and preventive actions.

Moreover, the research concludes that the common challenges involved in effective contract management in Jigjiga Segag rod project include unclear project scope; unrealistic timeline and budgets; corruption; inflexibility; payment conflicts; lack of cooperation; and insufficient use of ICT. It is also evident from the research findings that Jigjiga Segag road project that practice effective contract management realize high efficiency, flexibility and contractor relationship. They also experience short procurement cycle time and low contractor defects rate.

5.4 Recommendations

This research recommends that Jijiga –Segag road project must attempt to improve their contract management practices so as to boost their performance. Further, the study recommends that Jijiga Segag road project should put in place appropriate measures that ensure that potential risks regarding contract management and detected in advance and mitigated to enhance performance.

Further: to improve the practice and performance of the project the client should identify challenges or problems and provide timely solution; payment must be paid on time. It is also recommended to ensure adequate use of information technology in order to improve quality, speed, effectiveness and efficiency of their contract management practices. As well, since change is an inevitable aspect of life, state corporations should establish ways and means of coping with it so as to ensure that all contractual parties are satisfied.

5.5 Limitation of the study

The study was conducted on government sector only that further research should be conducted on contract management practice and performance in the private sector and the research assessed a single project undertaken by ERA.

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APPENDIX I

RESEARCH QUESTIONAIRE

Dear Participant:

My name is Hawi Jemal, I am recently involved in doing a master's degree in project management and doing a research entitled "Assessment of contract management practices and performance of road construction scheme: the case of Jijiga – Segag road project. You have been selected as one of the respondents in this research. I assure you that your response will be treated in strictly confidential and used only for the purposes of this study. Furthermore, I would like request you could complete and return it within a week of accepting it because a prompt response is crucial to finishing it on time.

I appreciate for your time and cooperation very much, and I look forward to hearing from you.

Sincerely yours

Hawi Jemal

The researcher

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Section A: General Information

Directions: The questions that follow are about you, your company, and your organization. Please indicate your response by marking (X or √ **)** the applicable box(es) or, if appropriate, fill in the blank spaces provided to express your response.

1. Sex ☐ Male ☐ Female

2. Age ☐ 20- 30yrs ☐ 31 -40yrs ☐ 41-50yrs ☐ 51yrs & above

3. Educational Background ☐ B.Sc. ☐ M.Sc. ☐ Other

4. Your Position ☐ Junior Engineer ☐ Engineer ☐ Sr, Engineer ☐ Lead Engineer ☐ Team Leader

5. Your Experience ☐ Less than 3 yrs. ☐ 3-8 yrs. ☐ 9-12 yrs. ☐ More than 12 yrs.

Section B: Extent to Which your project Practices Effective Contract Management

Please check the boxes next to the following statements to show how much you agree with them. Use the scale below: Strongly Disagree = 1, Disagree = 2, neutral = 3, Agreement = 4, and Strongly Agree = 5.

1. Contractor monitoring and Acceptance management

Description	**1**	**2**	**3**	**4**	**5**
The contractor performs his commitments and executes his duties as required by the contract.					
The client can identify any challenges or problems and provide timely solution.					
The consultant monitor, regulates, and assesses the contractor's performance.					
The client recognizes and responds to risks.					
The consultant evaluation of the progress the					

project is usually fair and unbiased					

2. Contractor Relationship management

Description	**1**	**2**	**3**	**4**	**5**
The client establishes and sustains a good working relationship with the contractor					
The client and the contractor have mutual trust.					
The client and the contractors share a common understanding.					
Regular communication between the contractor ,consultant and client					
There is timely management of possible problems in the contract					

3. Contract management

Description	**1**	**2**	**3**	**4**	**5**
The organization has an updated form of contract agreement.					
Contract variants are managed and under control by the organization.					
The contractor is paid on time					
The assets are managed properly.					
The consultant frequently creates reports.					

4. Dispute Resolution

Description	1	2	3	4	5
The client Utilizes the proper procedure to settle any potential disputes with the contractor					
The client ensures that each party is free to express its concerns					
Both the client and the contractor are in a position to benefit.					

5. Contract Closure

Description	1	2	3	4	5
The client control and certifies to the compliance of both contracting parties with their obligations.					
The client oversees and accredits the processes used to evaluate how successfully a contract is executed.					
The client guarantees the accomplishment of expected results.					
The client successfully ends or terminate contracts.					

Section C: Determinants of Effective Contract Management in the Jijiga – segag project

Please check the boxes next to the following statements to show how much you agree with them. Use the scale below: Strongly Disagree = 1, Disagree = 2, Unsure = 3, Agreement = 4, and Strongly Agree = 5.

Description	1	2	3	4	5
The appropriate strategic decisions are made, and the right contracts are drafted.					
Effective evaluation techniques exist.					
The contract management staff is equipped with the appropriate job-specific training, expertise, knowledge, and experience.					
Performance of contractors is effectively managed					
It creates a situation where both parties benefit (organization and the contractor)					
Ensures provision for modification (flexible or adaptable)					
Processes and contract management plans are well described.					
Parties behave independently and proactively.					
Has precise definition of roles					

Section D: Challenges involved in Contract Management Practice.

Please check the boxes next to the following statements to show how much you agree with them. Use the scale below: Strongly Disagree = 1, Disagree = 2, Unsure = 3, Agreement = 4, and Strongly Agree = 5.

Description	1	2	3	4	5
The ability to manage contracts effectively is hampered by unclear project scope.					
Effective contract management practices are hindered by unrealistic timelines and budgets.					
Corruption hampers the implementation of contract management successfully.					
Flexibility is important for good contract management procedures.					

Payment disputes get in the way of effective contract management procedures.					
Effective contract management techniques are constrained by a lack of cooperation					
The inability to manage data across several locations can cause successful contract management practices to fail.					
Proper contract management procedures are limited by inadequate ICT use.					

Section E: Performance

Please check the boxes that best describe how much the use of contract management practices has improved the performance outcomes for your organization. Use the scale below: 1 = Very Low, 2 = Low, 3 = Average, 4 = High, and 5 = Very High.

Description	**1**	**2**	**3**	**4**	**5**
How do you rate the organization's Procurement Cycle Time (Speed)?					
How effective is your organization as a whole?					
How do the organization relationships with its suppliers go?					
How flexible is the organization?					
How would you evaluate the supplier faults rate for your organization?					