ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

Assessment of Monitoring and Evaluation Practice of Federal Road Projects: The Case of Ethiopian Road Authority

By

Abinet Ergando

A Project Work Submitted to Addis Ababa University College of Business and Economics School of Commerce, in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Project Management.

June, 2018

Addis Ababa, Ethiopia

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Under the Supervision of

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Approval

The undersigned certify that they have read and hereby recommend to Addis Ababa University College of Business and Economics School of Commerce to accept the project work by Abinet Ergando and entitled "Assessment of Monitoring and Evaluation Practices of Federal Road Projects: The Case of Ethiopian Road Authority", in partial fulfilment of the requirement for the degree of Master in Project Management.

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Abstract

Monitoring and Evaluation of projects is usually one of the key main process of project management and an important components of good project performance. The main objective of this study is to assesses monitoring and evaluation practices of federal road projects: the case of Ethiopian Road Authority. Descriptive Survey design used and a sample size of 45 respondents was selected using a mix of stratified and purposive sampling. both primary and secondary data were used through questionnaire, interview and document review. Quantitative data was analyzed using descriptive statistics whereas qualitative data was analyzed using content analysis. Qualitative data was transformed into quantitative and analyzed with the helped of SPSS. A Cronbach alpha test was conducted to measure the internal consistency and reliability of the data collection instruments and was found out to be reliable Collected data was edited, sorted, cleaned and coded for data analysis. The findings were presented using percentages and frequencies, tables, pie charts and bar graphs. Based on the findings, the following conclusions are made. The top four most widely used evaluation techniques by ERA are: - Performance indicators, Logical frameworks, Resulted Based Approach and Cost Benefit Analysis. Project improvement and accountability to government drives the motivation for monitoring projects. The study also concludes that there is no defined time for the findings of the M&E to translate into improving the projects. Document review, site observation and community discussion are the top three techniques used to collect, manage and analyze data. Managerial ineffectiveness or insufficient implementation, inaccuracy in data collection and lack of M&E expertise are the main challenges facing proper implementation of M&E indicating lack of the necessary leadership and technical M&E expertise in ERA. Finally, this study recommends that it is important to choose among the techniques that best fits in to ERA's context and then standardize and apply it. Strengthen feedback from M&E into practice through rapid action plans, with systematic and more effective project monitoring practices and systems is crucial. It is also vital to expand use of innovative and technology guided approaches to M&E to increase project performance. Continuous programs to build the capacity of both managers and expertise in project management with emphasis on M&E activities helps to overcome some of the main M&E challenges.

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Abbreviations

ERA	Ethiopian Road Authority
ETB	Ethiopian Birr
M&E	Monitoring and Evaluation
MoFEC	Ministry of Finance and Economic Cooperation
NGO	Non-Governmental Organization
NPC	National Planning Commission
RSDP	Road Sector Development Program
USD	United States Dollar
USAID	United State of Agency for International Development
UNDP	United Nations Development Program
WB	World Bank

Chapter One

1. Introduction

1.1. Background of The Study

Monitoring and evaluation are viewed as related, but they are distinct functions. Monitoring is viewed as a process that provides information and ensures the use of such information by management to assess project effects and their impact. It aims at determining whether or not the intended objectives have been met. Evaluation on the other hand draws on the data and information generated by the monitoring system as a way of analyzing the trends in effects and impact of the project (Tengan, C., Aigbavboa, C. 2016). However, both project monitoring and evaluation are management functions geared towards achieving effective use and efficient utilization of project resources (Otieno, 2000)

Monitoring and evaluation are, therefore, critical to the performance of the projects and it seeks to facilitate strategic decision making to guarantee successful project implementation through a systematic and routine collection and assessment of project information. Project monitoring and evaluation are efforts made by project monitoring and evaluation teams (stakeholders) to achieve project objectives, problems with project delays, cost overruns and non-conformity and environmental issues as well (Otieno, 2000).

According to UNDP (2009), attention needs to be placed on some of the common areas of weakness in projects in order to improve the chances of project success. One of the four main areas of focus identified consistently is monitoring and evaluation. This leaves Planning, Stakeholder involvement and Communication as the remaining three areas to focus during project management.

As early as the year 2000, developing countries confirmed the inability to successfully deliver projects but they indicated the solution to this challenge is the implementation of monitoring and evaluation. Unfortunately, project monitoring and evaluation have been faced with numerous barriers to their implementation and it gets even worse in sub-Saharan nations (Otieno, 2000). From the above brief narration, it is possible to understand the importance of project monitoring and evaluation and the existence of challenges in doing

so. Therefore, this study aims to assess the monitoring and evaluation practice of federal road project and will try to identify the actual challenges faced in monitoring and evaluation activities.

1.2. Statement of The Problem

Project initiated by most developing countries have failed due to several reasons. Notable among these reasons for the failure of projects include poor planning of the project implementation process and the effective monitoring and evaluation of projects (Arditi,1985). IUCN asserts that a poorly planned project is difficult to monitor and evaluate effectively. Similarly, a well-planned project cannot deliver the desired project outcome but for the compliment of monitoring and evaluation (Idoro,2012). To ensure, therefore, that projects are implemented successfully to create the needed job opportunities, provide the needed health, educational and economic infrastructure, satisfaction of stakeholders, value for money, achieve project quality, budget, and schedule and to contributes to the socio-economic development of nations, M&E must be appreciated and implemented holistically throughout the life cycle of project delivery.

Many developing countries have numerous projects in an attempt to improve their infrastructure and this improves the standard of living of its citizens. Huge sums of money are put into this activity. Road infrastructures is one of the areas where such huge amount capital is invested. Road being critical infrastructure plays crucial role in transportation and support economic growth in the country. 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; Government of Ethiopia 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. Over the course of RSDP, a physical work of 128,470 km of road was built with ETB 266.2 billion or USD 17.4 billion (ERA, 2016).

It is obvious that this road projects have absorbed significant amount of money and this raises the question of how these projects are managed. More importantly, the value for money of this projects have to be well known. This is more relevant and essential question in resource poor countries like Ethiopia, where difficult decisions need to be made with respect to resource allocation priorities. Two aspects that would contribute towards ensuring efficient use of resources are project monitoring and evaluation. That is project monitoring and evaluation are critical tools that can help to provide the necessary information to guide strategic planning, design and implementation of projects, and to allocate, and reallocate resources in better ways. It also helps to track projects progress and gauge their importance. This study, therefore, aims to assess the monitoring and evaluation practice of federal road projects and identify the challenges in doing so.

1.3. Research Questions

Based on the above problem statement, this paper tries to answer the following key research questions.

i. What are the practices of monitoring and evaluation of federal road projects look like?
ii. What are the main challenges in monitoring and evaluation of federal road projects?

1.4. Objective of the Study

1.4.1. General Objective

The main objective of the study is to assess the practice of monitoring and evaluation practice of federal road projects.

1.4.2. Specific Objective

The specific objectives of this study are to: -

- Assess the practice of monitoring and evaluation on federal road projects.
- Identify the main challenges in monitoring and evaluation of federal road projects. and
- To suggest ways to improve the practice and overcome the challenges of monitoring and evaluation practices of federal road projects.

1.5. Significance of the Study

This study is done to understand the level and strength of monitoring and evaluation practices in federal road projects. Hence, it increases awareness about monitoring and evaluation process and practice in the projects. It also seeks to identify the underling challenges in M&E practice. Based on the findings, this study provides suggestions on areas that require improvement on the M&E practice. As result this study positively contributes for betterment of road project management in general and the M&E practice in particular. This in turn increases the likelihood of project success and improves performance of road sector in contributing to the overall economic development.

1.6. Scope of the Study

This study tries to assess the practices of monitoring and evaluation of federal road projects by Ethiopian Road Authority and hence the monitoring and evaluation practices of contractors and consultants in road construction projects is not covered in this study. This study, as indicated in the title, covers only road projects managed by federal government by focusing on the challenges, strengths and weaknesses, overall M&E practices. The study did not consider road projects by regional governments and subsequent administrative hierarchies.

1.7. Limitation of the Study

This study is limited in the sense that it only assesses M&E practice of road construction from the client side only without incorporating the practices of the contractors and consultants of the road projects. It is also limited in the sense that it only assesses the M&E practice of Ethiopian Road Authority. That is the M&E practices done by other government organs like Ministry of Finance and Economic Cooperation (MoFEC) and National Plan Commission (NPC) and also donor organizations on federal road projects is not included in this study.

1.8. Definitions of Terms

Monitoring refers to the continuous tracking of project by way of collecting and analyzing data as the project progresses. It is the systematic process of collecting and analyzing information to track the efficiency of an organization in achieving its goals (PMBOK, 2017).

Evaluation refers to the process of determining the worth or significance of an activity, policy or program. It is the systematic and objective assessment of the ongoing or completed projects in terms of planning, implementation and results in order to judge issues such as program relevance, effectiveness, impact and sustainability (PMBOK, 2017).

Monitoring and Evaluation: Monitoring and Evaluation is the process of systematically collecting and analyzing information of ongoing project and comparison of the project outcome/impact against the project intentions (PMBOK, 2017).

Project: a temporary endeavor undertaken to create a unique product, service, or result (PMBOK, 2017).

1.9. Organization of the Paper

This research paper is organized in to five chapters. The first chapter deals with the introduction part which encompasses the background of the study, the statement of the research problem, objectives of the study, significance of the study, scope of the study and limitations of the study. The second chapter deals with the review of related literatures. Chapter three focuses on the research methodology whereas the fourth chapter presents the result analysis and discussion of the data. Finally, conclusions and recommendations will be presented under fifth chapter

Chapter Two

2. Literature Review

2.1. Monitoring

Monitoring is the routine tracking and reporting of priority information about a project or program: its inputs, activities, outputs, outcomes and impacts. It is the process of gathering information about project performance and progress during its implementation phase. Monitoring gives information on where a policy, program or project is at any given time. It can provide a "snapshot" of the situation or program status (Zall Kusek and Rist, 2004). According to Milkovich (1991) and Olken (2007) large scale monitoring activities provide information that is useful in understanding the direction taken, in targeting resources and interventions, and in determining the degree of service coverage. Monitoring provides knowledge on the state and situation of a specific policy, program or project any given time (or over time) in relation to specific objectives and outcomes (Martinez, 2011).

2.2. Evaluation

Evaluation is an assessment, as systematic and objective as possible, of an ongoing or completed project, program or policy, its design, implementation and results. It examines the performance and impact of an intervention or project. Evaluation involves deep analysis on reasons for achieving or not achieving expected results. It assesses certain informal input from activities all the way to results, inspect the process of implementation, further analyze unexpected outcomes, and highlight the major and noticeable areas of success giving favorable suggestions to push for further improvements. Evaluation focuses on importance and how effective and efficient an intervention is by providing proof as to the reasons for underachievement. (Nyamwaro, E.M. (2011).

2.3. Monitoring and Evaluation in Project Management

According to PMBOK (2017) monitoring and control of project work is "the process of tracking, reviewing, and regulating the progress and the performance of the project; identify any areas in which the changes are required; and initiate the corresponding changes". It further explains that monitoring is collecting project performance data, producing performance measures, and reporting and disseminating performance information. Controlling is comparing actual performance with planned performance, analyzing variances, assessing trends to effect process improvements, evaluating possible alternatives, and recommending appropriate corrective action as needed.

The key benefit of this Process Group is that project performance is measured and analyzed at regular intervals, appropriate events, or when exception conditions occur in order to identify and correct variances from the project management plan

2.4. The Need for Monitoring and Evaluation

Monitoring and evaluating of projects can be of great importance to various project. The key benefit of M&E is that project performance is measured and analyzed at regular intervals, appropriate events, or when exception conditions occur in order to identify and correct variances from the project management plan (PMBOK, 2017).

The information we generate through M&E provides project managers with a clearer basis for decision-making. Through M&E, we can find out if the project is running as initially planned and inform us about the strengths and weaknesses of project implementation. M&E allow us to detect unexpected and unintended results and effects of projects to identify the internal and external factors that influence the performance of the project. M&E document and explain the reasons why project activities do succeed or fail and informs how project planning and implementation can be improved in the future (Ravallion, 2008 and Robbins, 1996).

2.5. An Effective Monitoring and Evaluation

According to Wanjiru (2013), the factors necessary for an effective monitoring and evaluation are such as: Monitoring and evaluating plan; allocating adequate human and financial resource, gathering baseline assessment; setting relevant indicators; and setting a plan to disseminate the results of M&E.

A. Monitoring and Evaluation plan

In order for projects to be effective, the project should have a monitoring and evaluation plan. Developing an M&E plan requires a proper understanding of the program, inputs, processes, output and outcomes. The inputs required would include human resources with M&E technical capacity and resources, authority and mandate to develop the M&E plan and technology infrastructure (IJIRD, 2013).

B. Strong Monitoring Team

Naidoo (2011) noted that if the M&E function is located in a section or associated with significant power in terms of decision-making, it is more likely to be taken seriously. He further explained that M&E units want to be seen as adding value and must for their own perpetuation be able to justify their efforts hence M&E managers need success factors to bolster their credibility. This means that the monitoring team needs to be enhanced and strengthened in order for it to have more power which will increase its effectiveness. . In addition to power of M&E teams, other factors also play a role in strengthening monitoring teams which includes: frequency of scope monitoring to identify changes, number of persons monitoring project schedule and extent of monitoring to detect cost over runs (Ling et' al, 2009).

C. Adequate budget

According to Zogo Ndomo(2015), there is need to allocate adequate resources for monitoring and evaluation (preferably 10% of project/organizational budget). This will ensure that organizations have adequate funds to acquire qualified technical staffs

responsible for M&E or build the capacity of existing staff in M&E, design and use effective M&E tools and have sufficient resources to conduct monitoring and evaluation.

D. Indicators

They are markers, which help us to measure changes or results brought about by an activity or an output from an activity. Where possible and relevant indicators should also allow for the collection of disaggregated data (by sex, age and other relevant variables) for each selected indicator, a source of information should be specified that details of when, how and by whom the necessary information will be collected. (IFRC, 2010)

E. Baselines

An effective M&E system sets factors or indicators used to describe the situation prior to an intervention and acts as a reference point against which progress can be assessed or comparisons made. These are sometimes referred to as benchmarks (WB, 2007).

F. Dissemination of results

Monitoring and evaluation not only help organizations reflect and understand past performance but serve as a guide for constructive changes during implementation. A good monitoring and evaluation system contributes to organizational learning and knowledge sharing by enabling institutions to reflect upon and share experiences and lessons from their implementation to get the full benefit of what the organization is doing and how they do it (IFRC 2011).

2.6. Monitoring and Evaluation Approaches

Effectiveness of project monitoring and evaluation is also dependent on the approach of M&E. There are various M&E approaches that have been singled out through literature review. Some of the M&E approaches that have been identified from the literature are explained in the following paragraphs.

Logical framework (Log frame) is one of the most common approaches used in project management for both planning and monitoring of projects. Log frame matrix is a tool that is applicable for all organizations both governmental and nongovernmental that are engaged in development activities (Middleton, 2005; Martinez, 2011). Hummelbrunner (2010) further confirms the continued use of Log frame despite several criticisms. He asserts that Log Frame's approach has not been fundamentally weakened by critics. Even though many donors acknowledge its limits and weaknesses, they still maintain its use as a planning and monitoring tool. Myrick (2013) expresses that a pragmatic approach to M&E is ideal however in the real-world practitioners may be limited by constraints that will prevent their continued use of either a log frame or some overly pragmatic approach to M&E. He further explains that whatever the approach used, at least the basic principles for M&E which are measurable objective, performance indicator, target and periodic reporting should be used in a reporting tool. The advantages of a Log frame include simplicity and efficiency in data collection, recording and reporting.

Results-Based Management is a management strategy focusing on performance and achievement of outputs, outcomes and impacts. This is where monitoring merges with evaluation to determine if the project is on target towards its intended results (outputs, outcomes, impact) and whether there may be any unintended impact (IFRC, 2011). According to the UNFPA (2014), the way planning, monitoring and evaluation are performed has considerably changed in the last decade. Many institutions and organizations moved from activity planning (what are we going to do?) to planning for the overall results (what do we want to achieve?). Therefore, the focus is on the results and consequences of actions and implementation, rather than on the inputs (money, time, human resources) provided.

Stem et al (2005) established that some of the monitoring and evaluation approaches that may be applied by project managers and monitoring teams include: basic research; accounting and certification; status assessment; and effectiveness measurement. Mladenovic et' al (2013), also established two layers' approach for the assessment of Private-Public Partnership projects. The first stage was based on evaluation of ultimate objective of the project from the standpoint of each stakeholder, i.e. profitability for private sector, effectiveness and value for money for public sector, and level of service for users.

The Balanced Scorecard is another approach that can be employed in evaluating projects. Balanced score card evaluates projects on the basis of four perspectives which are, the financial perspective, customer perspective, Internal Business Process, and Learning &Growth. Alhyari et'al (2013), found out that balanced score card approach fitted very well with monitoring and measuring the performance of e-government in Jordan, and also in evaluating their success in IT project investments.

Other approaches include stochastic methods, Fuzzy logic model, and miscellaneous methods. Of all the methods, the Earned Value Analysis (EVA) has remarkable advantages in accuracy, flexibility, and adaptability for project complexity.

2.7. Project Lifecycle Stages and M&E

PMBOK (2017) states that many of the monitoring and control processes are ongoing from the start of the project, until it is closed out. The Monitoring and Controlling Process Group monitors and controls the work being done within each knowledge area, process group, life cycle phase, and the project as a whole. It further advocates for constant monitoring and evaluation across all the four stages of the project lifecycle. Each stage of project life cycle requires different effort from the management. In the same way each stage in the project life cycle requires different level of effort in terms of monitoring and evaluation.

Kyriakopoulos (2011) elucidates that it is important to carry out frequent monitoring and perform focused reviews involving all the stakeholders in keeping the project on tract. Reviewing progress and controlling the use of resources should be carried out on a regular basis. He stresses the importance of overall monitoring throughout the project initiation, implementation, staff education, and technical maintenance.

The components of the Project Management Methodology include; project management processes such as initiating, planning, executing and monitoring project progress; a selection of tools and techniques to communicate delivery to the satisfaction of all stakeholders; consolidated and integrated set of appropriate best practices and values of project management and; a list of references of terminology as a common denominator and language for us in the project environment (Chin, 2012).

2.8. Role of Management in M&E

Management and leadership play a key role in supporting monitoring and evaluation of projects. Yang et' al (2011) carried out an analysis that suggested that increases in levels of leadership may enhance relationships among team members. Research also shows that planning, testing and monitoring the progress of the project work are some of the key processes used to manage the project work (Georgieva & Allan, 2008). Management has a role in enhancing project success through supporting monitoring and evaluation team. Such support may be achieved through factors such as Communication, Commitment, Leadership Style, managing politics, Managing societal demands and Motivation. Management are key decision makers in an organization as result the role of facilitating the implementation of M&E in projects is dependent on managers' level of commitment to do so (Magondu, 2013).

2.9. Major Challenges of Monitoring and Evaluation

Monitoring and Evaluation is an important component of project management tool because it generates a large amount of vital information that allows project administrators to: identify the major problems, constraints and successes encountered during implementation, through analysis of the data collected; adjust project activities, plans and budgets according to data generated through the use of M&E tools and methodologies; provide information for accountability and advocacy to the targeted communities, and to the government agencies and national and international donors involved. M&E therefore plays a crucial role in enhancing a project's success (Rao, 2003).

Due to this, better implementation and use of M &E benefits an organization that is mandated to design and execute a project. However, there are a number of constraints and challenges that hinder these benefits. The factors contributing to poor implementation and use of M&E in an organization are many in number.

Different problems faced during conducting the M&E. According to UNAIDS (2008); Ravallion (2008) and Bamberger (2009), the following challenges are the major ones identified in M&E activities.

A. Poor Organizational Capacity

Organizational processes might not support the use of data. For instance, officials might be reluctant to use data that has not been officially sanctioned. Perhaps the release of certain sensitive information is tightly controlled and can be shared only by official protocol. More often, there are simply no channels or systematic processes to share data with people who could use it. In addition to this, organizations often lack data analysis skills, so collected information sometimes ends up unanalyzed and unused. Lacking capacity, staff/communities shy away from monitoring. They perceive it as something mystical rather than an everyday activity. Inadequate understanding of and attention to M&E in project design and subsequently inadequate resource allocation and hierarchical organization of decision-making and analysis, monitoring is seen as an obligation imposed from outside, M&E documentation that does not address or resolve identified problems; irrelevant and poor quality information produced through monitoring that focused on physical and financial aspects and ignores project outreach, effect and impact; almost no attention to the monitoring and evaluation needs and potentials of other stakeholders such as beneficiaries and community-based and other local cooperating institutions. These situations happen in an organization that is mandated to design and implement a project lacks the benefits mentioned above (UNAIDS, 2008).

B. Scarcity of Competent Staff

Many information systems including those organizations that design and implement a project suffer from shortages of skilled people to manage, interpret, and use the data; and

motivation and incentive to generate high quality of data for M&E purposes. Persons expected to carry out data collection are frequently expected to take this role as an additional task, to be worked in and around the more important service-oriented tasks. Thus; these organizations become unable to see the proper process of project implementation and its outcome (Ravallion, 2008).

C. Inadequate Budget Allocation

Most activities and systems of M&E of an organization suffer from budget constraints. The design and implementation of M&E of a project needs an adequate budget that is needed for data collection, organization, analysis and formal presentations that encompass all stakeholders (Ravallion, 2008).

D. Technology

Now a day, data gathering tools require the implementation of an advanced technology in order to come up with an accurate, complete and timely report of M&E. The endemic shortage of computers is an obvious technical constraint, but there are other common technical issues that erode data quality. For instance, inadequate computers and software for data capture hamper the proper design and implementation of M&E. Contributors, on the other hand, could be defining data variables indicators differently, or using different sources for the same data element or indicator, or using different algorithms to report it (UNAIDS, 2008).

E. Lack of Integration

The proper design and implementation of M&E activities need the integration of the whole system of project owners. Lack of consistency in some data collected damage the whole system and outcome of M&E. Lack of commitment to monitoring by project staff and implementing partners may lead to delay in implementing monitoring systems. More often, lack of information use by project management; widespread lack of integration and cooperation between project M&E and project management with no clear, mutually agreed-upon guidelines; poor use of participatory and qualitative M&E methods, due to

limited capacity and inability to see the need for such information are major problems of integration during the design and implementation of M&E (Bamberger, 2009).

F. Explaining Monitoring and Evaluation

There is generally anxiety about the difficulty of monitoring. It has always been considered scientific and the domain of professionals. M&E systems have tended to be complicated, "scientific and objective" and thereby creating an exclusive group of users. Another challenge is the need to clarify the concept of "measurement": There has been over-reliance on quantitative measurements or information. Many donors and managers have principally requested numerical (quantitative) information about a piece of work. It looks more precise and leads one to believe that it is easier to compare and summarize than qualitative information (UNAIDS, 2008).

G. Participation and Involvement

Organizations often lack data analysis skills, so collected information sometimes ends up unanalyzed and unused. Lacking capacity, staffs shy away from monitoring. Information users: identification of information users and involving them in the whole process is not always thoroughly done. Involving potential users in the design of monitoring will not only help them clarify their information needs (negotiating them), but also ensure their support for the M&E system and utilization of its findings (Bamberger, 2009).

This study having identified study gaps, the researcher is keen on assessing the M & E practice of federal road projects by Ethiopian Road Authority. Side by side it tries to identify the main challenges of practicing M&E in the organization.

Chapter Three

3. Research Methodology

3.1. Study Area Description

This study aims to assess the monitoring and evaluation practice of federal road projects: the case of Ethiopian Road Authority. This study, as indicated on the scope of the study section, assesses the M&E practice of one of the three contacting parties in the road project−the client. Meaning the M&E practice of contractor and consultant in road construction is not addressed in this study. Ethiopian Road Authority Reestablishment, along with other duties and responsibilities, has given power and duties of conducting supervision activities in federal road projects.

3.2. Study Design

This study is descriptive study and uses a cross sectional survey method as to collect both qualitative and quantitative data from primary and secondary sources. A cross sectional survey method is employed to assess the practice of M&E activities at federal road projects. However, considering the limitation of cross sectional method in capturing changes over time, some questions will be designed to approximate process of changes over time. That is, certain questions will be included to measure change and process over time in M&E practice in managing the federal road. Therefore, cross sectional method will be used because of its effectiveness in terms of both time and money and approximating longitudinal survey by cross sectional methods is used to answer research questions involving process of changes over time.

3.3. Sampling Technique

a) Target Population

The populations for this study was all 2298 employees of Ethiopian Road Authority (ERA) during the data collection period. That all employees of ERA at the head office, training center and road network management offices located in 10 different parts of Ethiopia. This study narrowed down and used all 551 employees of ERA who work on the M&E activities as its target population. This target population are employees from Engineering operations, road asset management and Planning and ICT management division in the organization that perform the M&E activities.

b) Sampling Technique

Purposive sampling is preferred in this study because it is an important research tool when the target population is difficult to locate or identify, or when the sampling size is very small to represent entire population efficiently. For this reason, purposive sampling is used to identified the sample from road project M&E experts and officers, planners and managers.

The respondents of the survey questionnaire are selected using purposive sampling method from each department in a manner that make sure representation of the target population. That is each department, team leaders and experts working in M&E teams are allowed to respondents by filling the survey questionnaire.

An In-depth Interview is used to obtained additional data and helps to triangulate data collected through questionnaire. The participants on In-depth interview are chosen purposively with the assumption that they are key stakeholders and, hence, can have detail information on the monitoring and evaluation of road projects.

c) Sampling Unit and Sample Size

This study from a target population of 551 determined a sampling unit of 225 who are the core professionals doing the actual monitoring and evaluation work and composed of departments heads, team leader and experts. That is from the target population those that are not involved in actual monitoring and evaluation work are left out in framing the sampling unit. According to Kothari (2014), a sample of 10% and above of a population can often give a reliable data. From the target population of 551 and sampling unit of 225 employees a sample of 20% (45 employees) through mix of purposive and stratified sampling were selected. Therefore, the sample size of 45 employees used for analysis in this study. The composition of samples indicated as follows: -

Table 3-1: Sampling matrix of Population

Departments Execution M&E	**Target Population**	**Sampling unit**	**Sample size (20% of 225)**
Planning and program management	53	13	3
Express Way	43	24	5
Western Region	71	29	6
Southern Region	80	34	7
Northern Region	79	27	5
Central Region	79	32	6
Eastern Region	65	29	6
Design and Build	72	34	7
Road Asset Management	9	3	1
Total	**551**	**225**	**45**

3.4. Sources and Method of Data Collection

This study used both primary and secondary sources to generate appropriate data. Primary data is collected from departments heads, team leader and experts in the ERA using questionnaire, in-depth interview. Secondary data, on the other hand, collected from different publications and reports documents from aforementioned institutions and other relevant government organs.

3.5. Method of Data Analysis

This study used both qualitative and quantitative method of data analysis to meet its objectives. Quantitative data from survey questionnaire is analyzed using appropriate statistical tools. Meanwhile, in-depth interview is analyzed using description, narration as well as crosschecking its validity and reliability with the quantitative data set. Data gathered and analyzed from primary and secondary sources are presented through tables, figures and chars.

3.6. Reliability Analysis

Regarding the results on reliability of the study instruments are presented in the figure 3.1 below. The reliability of the questionnaire was evaluated through Cronbach's Alpha which measures internal consistency, by establishing if certain items measure the same construct. Cronbach's Alpha was established the findings of the shows that all the six scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 and below 0.9 (Mugenda & Mugenda, 2003)

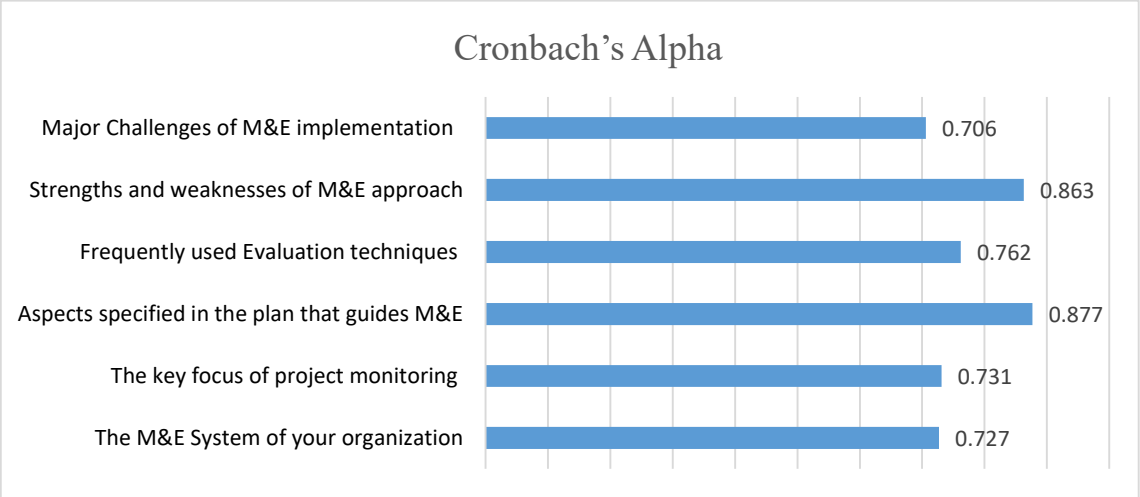

Figure 3-1: Cronbach's Alpha

Chapter Four

4. Results and Discussion

4.1. Response Rate

The study targeted 45 respondents drawn from core professional doing the M&E activity in ERA 39 employees responded. However, 36 employees responded and returned their questionnaires contributing to 80% response rate. 3 questionnaires are partially filled in and hence left out of data entry.

4.2. Monitoring and Evaluation Practices and Process

4.2.1 Monitoring and Evaluation Organizational System Overview

The M&E System of your organization

In an effort to find out the ERA's organizational M&E system overview this study asked the respondents to rate on a five-point Likert scale where 5 - Strongly agree; 4 - Agree; 3 - Neutral/not sure; 2 - Disagree, 1 - Strongly Disagree. The mean and standard deviations indicated in the table 4.1 below.

From the findings, majority of the respondents agreed with the statements that documentation and information sharing during M & E process and existence of defined work structure with a mean score of 4.06 and 4.03 respectively. On the other hand, most of the respondents disagreed with statement that 'projects always started and completed as per the planned time, cost and quality' with the lowest mean score of 1.69. this therefore a weakness agreed by with almost all respondents.

Table 4-1: Overall preview of ME in ERA

The M&E System of your organization	Mean	Std. Deviation	N
Documentation and information sharing	4.06	0.53	36
Defined work structure	4.03	0.70	36
Carryout need assessment for all projects	3.83	0.91	36
Clear methods of data acquisition and frequency	3.81	0.67	36
Allocates resources for M&E	3.81	0.71	36
Capacity building scheme for M&E	3.69	0.71	36
Stakeholders involvement in M&E is done consistently at all levels	3.64	0.87	36
Culture of disseminating M&E findings	3.56	0.70	36
Strict reporting of M&E results to appropriate party	3.33	0.96	36
Policy/legal framework of M&E	3.25	0.94	36
Projects always start and completed as per the planned time, cost and quality	1.69	0.58	36

Purpose of monitoring and Evaluation

In an effort to find out the ERA's main driving reasons for doing project M&E, this study asked the respondents to rate on a five-point Likert scale where 5 - Strongly agree; 4 - Agree; 3 - Neutral/not sure; 2 - Disagree, 1 - Strongly Disagree. The mean and standard deviations indicated in the table 4.2 below.

Table 4-2: Motive for monitoring

The key focus of project monitoring and evaluation in your organization is?	Mean	Std. Deviation	N
Project Improvement	4.14	0.639	36
Accountability	4.03	0.609	36
Performance management	3.94	0.715	36
Compliance	3.83	0.697	36
Value for Money	3.78	0.832	36
Impact Measurement	3.64	0.867	36

Study respondents agreed that the most important purposes of M&E are for project improvement (with 4.14 mean score) and accountability (with 4.03 mean score). Meanwhile, impact measurement and value for money with a mean score of 3.64 and 3.78 respectively accorded a relatively less priority factor for conducting M&E in ERA.

4.2.2 Monitoring and Evaluation plan

All research participants were asked whether the organization have a plan that guides M&E during project implementation and they unanimously responded (see table 4.3) that all projects in ERA have M&E implementation guide.

Table 4-3: M&E Plan

Questions	Value	Frequency	Percent
Plan that guides M&E during implementation?	Yes, for all projects	36	100
	Total	36	100
The type of M&E plans your organization employ is?	Separate	9	25
	Incorporated within main proposal	11	31
	Incorporated into the routine work plan of your organization	16	44
	Total	36	100

Regarding the question aimed at investigating the type of M&E plan employed by ERA, table 4.3 above indicated that 44% of the respondents replied that M&E plan was incorporated into the routine work plan of their organization, while 31% replied that the plan was incorporated within main proposal. The remaining 25% of the respondents replied that the plan was separate. This shows that the majority of the respondents (75%) have confirmed that the type of M&E plan used by ERA is either incorporated within main proposal of the project or incorporated into the routine work plan of the organization.

Budget Allocation monitoring and evaluation

Regarding the percentage of the project budget allocated of M&E, the majority of respondents (75%) stated that the percentage of the total project budget is allocated for M&E is not specified. 11% responded that they don't know the share of budget for M&E and the same percentage of respondents agreed more than 10% of the total project budget is allocated for M&E.

Table 4-4: Budget Allocation for M&E

Questions	Value	Frequency	Percent
On average what percentage of the total project budget is allocated for M&E?	Less than 5%	1	3
	More than 10%	4	11
	Not specific	27	75
	I don't know	4	11
	Total	36	100

Regarding the allocation of budget for M&E activities the interview result indicated that there is no separate budget allocation for M&E activities for most of the projects. However, less than 20% of the projects have separate budget allocated for the endeavor.

Monitoring system effectiveness

M&E plan were questioned on whether they incorporated the following major aspects of monitoring and evaluation in their plan or not. To do so, this study asked the respondents to rate on a five-point Likert scale where 5 - Strongly agree; 4 - Agree; 3 - Neutral/not sure; 2 - Disagree, 1 - Strongly Disagree. Table 4.5 below illustrates that the M&E plan clearly identified data to be collected (with mean score of 4.03) followed by aggregating monitoring results and clear schedule for M&E activities with a mean score of 3.75 each.

Table 4-5: Aspects of Plan Specified in M&E Guide

Which of the following aspects are specified in the plan that guides M&E activities of your organization	Mean	Std. Deviation	N
Data to be collected identified	4.03	.654	36
Monitoring results aggregated	3.75	.732	36
Schedule of M&E activities clear	3.75	.770	36
Roles and responsibility of staff in M&E clear stated	3.72	.914	36
Frequency of data collection defined	3.72	.741	36
Projects monitored with plans at inception	3.64	.867	36
Monitoring plans integrated with evaluation framework	3.58	.874	36
Plan/schedule for dissemination of findings	3.56	.843	36
Resources needed for M&E adequate	3.53	.910	36

The table 4.5 above indicate that, relatively respondent failed to agree with the statement that there are adequate resources needed for M&E activity and clear for Plan/schedule for dissemination of findings with mean score of 3.53 and 3.56 respectively.

Evaluation Techniques

In quest of investigating frequent used evaluation techniques, respondents were given options, 1 – Yes, 2 - Uncertain and 3 - No and this study come up with divergent mean score result on techniques used for evaluation. As indicated in figure 4.1 Performance Indicators (with mean score of 1.22) and Logical Frameworks (with mean score of 1.22) are the most frequently used evaluation techniques. On the other hand, ERA is not frequently using techniques of Theory of Change, Indirect/proxy indicators, and Return on Investment as road projects evaluation techniques.

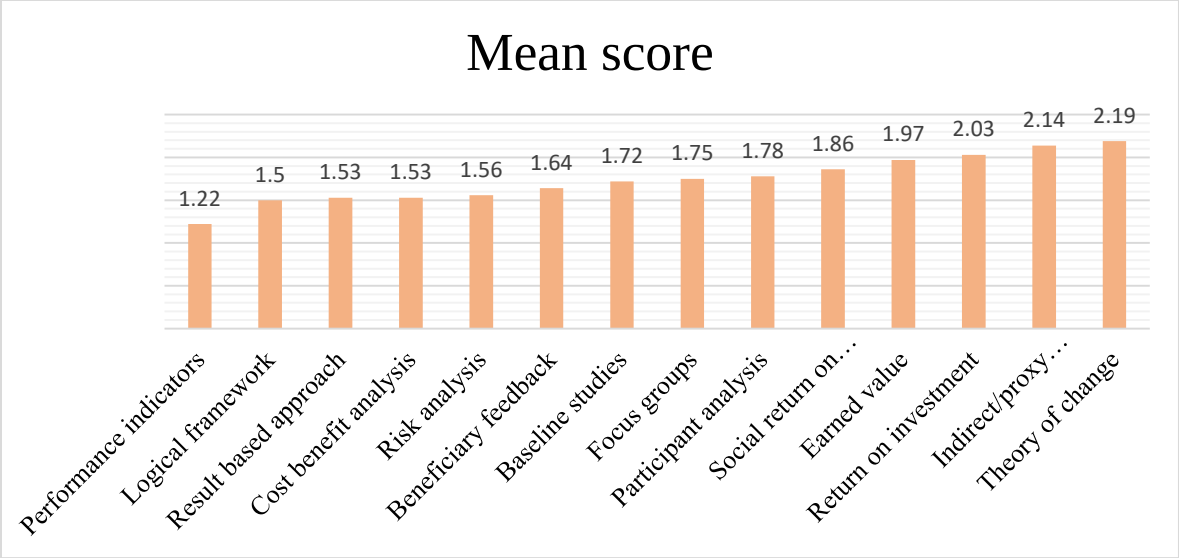

Figure 4-1: Frequently used Evaluation Techniques

For figure 4.1 one can understand that there is divergence in terms of the approach used to undertake M&E activities. This therefore, is an indication that there are no standardized M&E undertaking approaches in ERA.

4.2.3 Capacity Building

Training and Number of M&E Experts

This study sought to find out whether ERA provide M&E training for its staff and the finding indicated in the table 4.8 below show that 72% of the respondents confirmed that they got M&E training while the remaining 28% responded that ERA didn't give them any training on M&E topic. Further this study sought to find out whether ERA has adequate experts to conduct M&E. The findings are 47% felt that the number of experts doing M&E are not as expended and significant number of respondents (33%) felt that are no adequate M&E experts. It is only 19% of the respondents that believe ERA has adequate number of M&E experts.

Table 4-6: Training and Number of M&E Experts

Questions	Value	Frequency	Percent
Does your organization provide M&E training for Monitoring and Evaluation staff?	Yes	26	72
	No	10	28
	Total	36	100
Are there adequate M&E experts at the organization?	Yes	7	19.4
	No	12	33.3
	Not as Expected	17	47.2
	Total	36	100
Do you feel your skills in M&E limit M&E performance?	Yes	26	72
	No	10	28
	Total	36	100

As indicated in the table 4.6 above this study sought to know whether skills of respondents limit the M&E performance and the finding is that most of them (72%) believe that it limits M&E performance and it is only 30% who disagree with notion that their skill limits M&E performance.

4.2.4 Project Monitoring and Evaluation Process

Planned Versus Actual Performance Comparison Frequency

Figure 4.2 below shows the frequency of checking or inspecting the project plan with actual performance in terms of project schedule, finance, quality and overall progress. The findings to the question that sought to determine how often the respondent believe plan schedule crosschecked with the actual project schedule, most of the respondents (92%) agreed that it is done in monthly basis and the remaining 8% felt that it is done on quarterly basis. Similarly, financial comparison between projects planned versus actual performance is done on monthly basis (94% of respondents) and only 6% agreed that such comparison is done on quarterly basis.

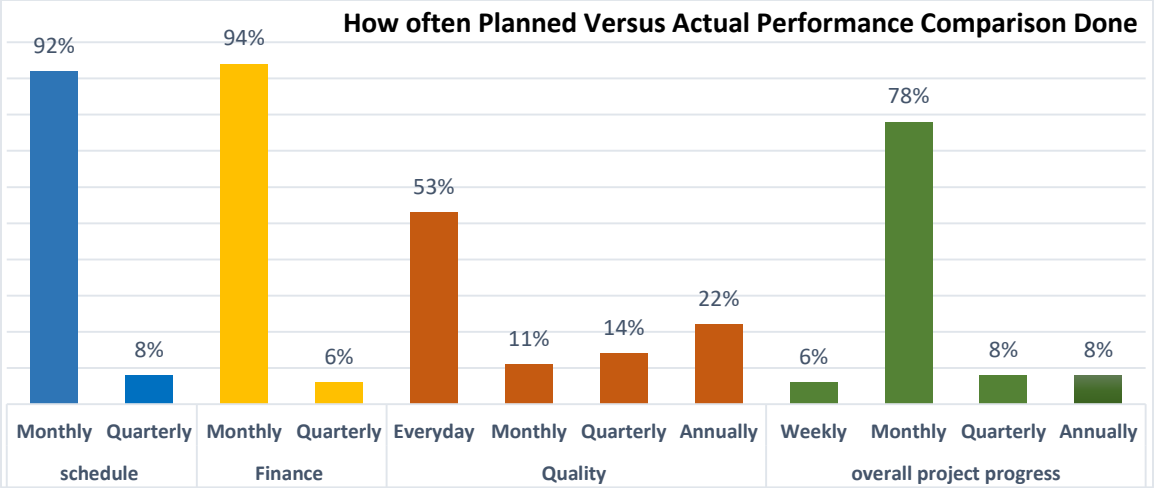

Figure 4-2: How often Planned Versus Actual Performance Comparison Done

The finding regarding quality varied from checking it every day (53%) to inspecting it on annual basis (22%). Regarding comparison of the actual overall project progress against the original plan, 78% agreed that the progress is done on monthly basis. 8% of the respondents believe that the overall project progress inspected on a quarterly basis and same percent of respondents believe on annual basis. It is only 6% who responded in favor of weekly based inspection. Therefore, it is possible to conclude that the performance comparison between planned and actual progress is done on a monthly basis.

Resources Monitoring

Regarding monitoring of how project resources like machineries and other equipment are effectively employed to the project activities, 50% of the respondents believed that project equipment is partially employed and only 3% felt that there is no efficient employment of resources at all. Meanwhile, 47% of the respondents felt that resources are employed efficiently. This indicates that there is significant inefficiency regarding the optimal use of project machineries and equipment for project purpose. The interview made in this regard confirmed that there is considerable suboptimal and misuse of project resources for project purpose.

Table 4-7: Resources Monitoring

Questions	Value	Frequency	Percent
Monitor how project resources like equipment are effectively employed to the project?	Yes	17	47
	No	1	3
	Partially	18	50
	Total	36	100

Timeliness of Monitoring and Evaluations Results

This study sought to find how long it takes for the results of M&E to result in improvements in current and future programs. The findings indicated in the table 4.8 below show that most respondents (47 percent) believe that there is no defined time period for the results of M&E to lead to improvements in current and future programs. Whereas 22% responded it will take less than 3 months and 17% of the responders believe from 6 months to 1 year for the lessons from that M&E to be applied at a project level.

Table 4-8: Timeliness of Monitoring and Evaluations Results

Questions	Value	Frequency	Percent
How long does it take for the results of M&E to result in improvements in current and future programs?	Less than 3 months	8	22
	3 – 6 months	4	11
	6 months – 1year	6	17
	More than 2 years	1	3
	No defined time	17	47
	Total	36	100
The finance to carry out M&E activities are?	Always adequate	2	6
	Adequate	9	25
	Rarely Adequate	8	22
	I don't know	17	47
	Total	36	100

Respondents were asked to rate the adequacy of finance to carry out M&E activities and the result is that 47% of respondents don't know whether it is enough or not, 22% believe that it is rarely adequate, 25% felt it adequate and it's only 6% that believe the finance is always adequate.

Evaluation Type

In quest of investigating frequent used type of evaluation, respondents were given options: All the time =1, Sometimes = 2 and Never = 3, and the result indicated in the table 4.9 show that Summative evaluation (end of project) with a mean score of 1.39 is frequently used type of evaluation followed by Midterm (interim) and Ex-post (after the end of the project) evaluation with a mean score of 1.42 and 1.58 respectively.

Table 4-9: frequently used Evaluation Type

Questions	**Value**	**Mean**	**N**
Which type of evaluation do you carry out on the projects?	Summative evaluation (end of project)	1.39	36
	Midterm (interim) evaluation	1.42	36
	Ex-post Evaluation (after the end of the project)	1.58	36
	Impact evaluation	1.94	36
	Ex-ante evaluation (beginning of the project)	2.03	36
	Sustainability evaluation	2.06	36

Sustainability evaluation, Ex-ante evaluation (beginning of the project) and Impact evaluation are less frequently used project evaluation types in road project. The result indicates that ERA doesn't give much attention to evaluate sustainability, Ex-ant and Impact evaluation.

Organ to Conduct Evaluation

To find out responsible organ to conduct evaluation in ERA's this study asked the respondents to answer Yes =1, Partially = 2 and No = 3 The mean and standard deviations indicated in the table 4.10 below.

Table 4-10: Organ to Conduct Evaluation

Which parts of the organization is/are responsible for Evaluation?	Mean	N
Central Evaluation Team/ Department (internal)	1.36	36
Program Team Evaluations	1.53	36
Commissioned Consultancy Evaluations	1.58	36
Evaluation by donors	1.86	36
Independent Evaluation	2.11	36

The result indicated that evaluation by Internal team/department (with mean score of 1.36) is the more frequently used evaluation approaches followed by Program Team Evaluations and Commissioned Consultancy Evaluations. Meanwhile, fully independent evaluations and Evaluation by donors are less often used.

Aims of Evaluation

The respondents asked to Yes = 1, Partially = 2 and No = 3 for what they think is the aim of evaluation in ERA. The findings indicated in the table 4.11 shows that all respondents (with mean score of 1) believe that they look to evaluate output. Meanwhile, 50% of respondents aim to evaluate outcome and the figure even goes down as low as 33% for evaluation work to aim on assessing impact of the road projects.

Table 4-11: Aims of evaluation

What do you aim to evaluate?	Value	Frequency	Percent	Mean
Outputs	Yes	36	100	1.00
Outcomes	Yes	18	50	1.50
	Partially	18	50	
Impact	Yes	12	33	1.67
	Partially	24	67	

Strengths and Weaknesses of Monitoring and Evaluation

To identify the strengths and weaknesses of M&E in ERA, this study asked the respondents to rate on a five-point Likert scale where 5 - Major Strengths; 4 - Strengths; 3 -No Opinion/Uncertain; 2 - Weaknesses, 1 - Major Weaknesses. The survey result illustrated in table 4.12 indicated that there is high confidence in the rigor of measurement (with mean score of 3.67) for M&E followed by strength in the quality assurance process of the evaluation work (with mean score of 3.61). One of the main perceived weaknesses in ERA's organizational approach to M&E is related to Feedback mechanisms (with mean score of 3.17) that there is delay in responding to the M&E findings in way to effectively translate in to changes. Another perceived weakness comes from the inadequacy of strong external inspection (with mean score of 3.33) from government organ and to some extent donors.

Table 4-12: Strengths and Weaknesses of M&E

Questions	**Value**	**Mean**	**N**
The main strengths and weaknesses of ERA's approach to M&E?	Rigorous Measurement	3.67	36
	Quality assurance – high quality of evaluation work	3.61	36
	Timeliness – speed in finding what is not working and working	3.47	36
	Overall levels of investment and frequency – sufficient evaluation activity	3.44	36
	Level of independence –strong external inspection	3.33	36
	Feedback mechanisms – findings are effectively translated to changes	3.17	36
	Impact for project success – helps projects to always start and completed as per the planned time, cost and quality	2.73	36

Looking in to the mean score in the table 4.12 above one can conclude that rigorous measurement and quality assurance work with mean score of 3.67 and 3.61 respectively, as the major strengths of the M&E approach in ERA, however, inadequacy of M&E in

impacting project success, weak feedback mechanisms and insufficient scrutiny of its activities as major weaknesses of the organization.

4.2.5 Data/Information management

Tools and Techniques used to Collect, Manage and Analyze Data for M&E Purposes

The respondents asked to respond as Yes =1 and No =2 for the tools and techniques used to collect, manage and analyze data for M&E purposes. The result indicated that document review followed by site observation with mean score of 1.06 and 1.08 respectively are the most frequently used data collection and management techniques during M&E of road projects.

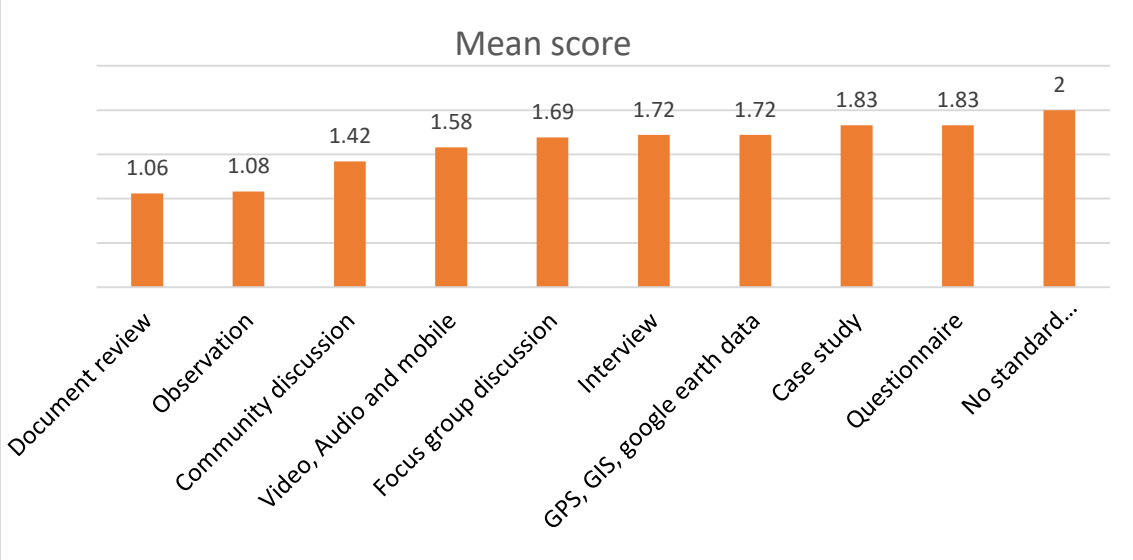

Figure 4-3: Tools and Techniques used to Collect, Manage and Analyze Data

On the other hand, as depicted in figure 4.3 above, the use of questionnaire and case study in ERA are rarely applied tool and techniques for data collection, management and analysis during M&E process. The respondents included in the survey unanimously replied "No" to the question asked "No standard tools/techniques" used in ERA for data collection, management and analysis in executing M&E activity.

Data Analysis to Assess Achievement and Assist Decision Making

Regarding regularity of data analysis, all respondents (see table 4.13) agreed that existence of regular data analysis to assess achievements of the road projects. But 80.6% of respondents agreed the subsequent M&E information generated through analysis is regularly given to program managers/officers to assist in decision-making and planning. while nearly 14% responded the information will be provided but in an irregular manner and the remaining 5.6% don't believe M&E information will not be given to program managers/officers to assist in decision-making.

Table 4-13: Data Analysis to Assess Achievement and Assist Decision Making

Questions	**Value**	**Frequency**	**Percent**
Does your organization regularly analyze data in order to assess achievements?	Yes	36	100
	Total	36	100
Is M&E information provided to program managers/officers to assist in decision-making and planning regularly?	Yes	29	80.6
	No	2	5.6
	Not Regularly	5	13.9
	Total	36	100

Lesson learned Documentation

Respondents were further probed for culture of documenting lessons for projects they implemented. Table 4.14 below indicates that 58% of respondents believe that documentation of lessons learned is done partially and 39 % respondents agreed that there is documentation of lesson learned. This therefore clearly indicate that there is no adequate documentation of the lesson learned.

Table 4-14: M&E Lesson learned Documentation and Experience sharing

Questions	Value	Frequency	Percent
Does your organization documents lessons learned on project execution?	Yes	14	39
	No	1	3
	Partially	21	58
	Total	36	100
Experience sharing and adoption of best practices in your organization is?	Absent	4	11
	Only to some extent	27	75
	Well developed	5	14
	Total	36	100

Regarding experience sharing and adaptation of best practices, 75% replied experiences are shared but only to some extent while 14% of the respondents replied about the existence of a well-developed experience sharing practices and whereas, 11% responded the absence of such practice. This indicates that majority of the respondents (86%) have confirmed that there is no culture of experience sharing, if there is one, it is only being done to some extent.

M&E Findings Disseminations Modes

Respondents were asked for the methods they employ to disseminate M&E findings and given the option to say Yes=1 and No=2. The finding illustrated in table 4.15 indicates that all respondents (with mean score of 1.0) believe M&E report is disseminated for appropriate government organ and this is followed by report at stakeholder's meetings and report to field staff.

Table 4-15: M&E Findings Disseminations Modes

Questions	Value	N	Frequency	Percent	Mean
How do you disseminate M&E findings?	Report for government organ(s)	36	36	33	1.00
	Stakeholders meetings	36	25	23	1.31
	Report to field staff	36	21	19	1.42
	Report to donors	36	14	13	1.61
	Internet/website	36	12	11	1.67
	No dissemination	36	0	0	2.00

M&E finding dissemination modes like using internet/website and reporting to donor organization are less frequently used methods. The finding from interview indicated that the main government organs that require M&E reports are Ministry of transport, Ministry of Finance and Economic Cooperation, National Plan Commission and House of Peoples Representative Standing Committee.

4.3. Major Challenges of Implementing M&E in ERA

This section sought to determine the main challenges of M&E on road projects. All participants asked to rate on a five-point Likert scale where 5 - Strongly agree; 4 - Agree; 3 - Neutral/not sure; 2 - Disagree, 1 - Strongly Disagree. Table 4.16 depicts the result.

The finding indicates that managerial ineffectiveness or insufficient implementation (with mean score of 3.78) is the most frequently cited challenge of implementing M&E in ERA. This is followed by other challenges namely inaccuracy in data collection and lack of M&E expertise with mean score of 3.72 and 3.64 respectively. Unavailability of funder, less involvement of employees, and failure to process and analyze data are accorded as relatively less significant challenges that hamper proper implementation of M&E in ERA.

Table 4-16: Major Challenges of Implementing M&E in ERA

Questions	Value	Mean	N
What the possible challenges in M&E activities of projects in your organization?	Managerial ineffectiveness or insufficient implementation	3.78	36
	Inaccuracy in data collection	3.72	36
	Lack of expertise	3.64	36
	Inadequate financial resources	3.64	36
	Failure in selecting the correct performance indicator	3.50	36
	Failure in evaluation design	3.47	36
	Uncommitted management	3.36	36
	Failure in planning	3.33	36
	Less involvement of stakeholder	3.28	36
	Failure to process and analyze data	3.22	36
	Less involvement of employees	3.22	36
	Unavailability of funder	3.19	36

Chapter Five

5. Summary, Conclusions and Recommendations

This chapter presents the summary of the findings analyzed in chapter four according to the study objectives. The chapter also presents the conclusions and the recommendations to the study.

5.1. Summary

This study with is done with the main objective to assesses monitoring and evaluation practices of federal road projects: the case of Ethiopian Road Authority. And it also tries to identify the main challenges being encountered while implementing the M&E activities. In order to meet these objectives, descriptive survey design used and from the target population of 551 and sampling unit of 225 was selected. From the sampling unit, a sample size of 45 respondents was selected using a mix of stratified and purposive sampling. both primary and secondary data were used through questionnaire, interview and document review. Quantitative data was analyzed using descriptive statistics whereas qualitative data was analyzed using content analysis. Qualitative data was transformed into quantitative and analyzed with the helped of SPSS.

A Cronbach alpha test was conducted to measure the internal consistency and reliability of the data collection instruments and was found out to be reliable. From the distributed questionnaire 80% was returned. This collected data was edited, sorted, cleaned and coded for data analysis. The findings were presented using percentages and frequencies, tables, pie charts and bar graphs.

Regarding the ERA's organizational M&E system overview he findings, majority of the respondents agreed that documentation and information sharing during M & E process and existence of defined work structure as areas ERA doing better. Meanwhile, M&E of projects to start and finish as per the planned time, cost and quality is seen as an area with considerable weakness. The vast majority of respondents agreed that they monitor projects for project improvement followed by accountably to government as the main purpose in

mind. Therefore, project improvement and accountability to government drives the motivation for monitoring projects.

The findings of this study also indicate that, the top four most widely used evaluation techniques by ERA are: - Performance indicators, Logical frameworks, Resulted Based Approach and Cost Benefit Analysis. Project improvement and accountability to government drives the motivation for monitoring projects. Similarly, Summative evaluation (end of project) and midterm (interim) evaluation are the most frequently exercised evaluation types in ERA.

Regarding capacity building the findings, indicate that although there are trainings provide by ERA on issues related to M&E most of the respondents don't believe that it is adequate to conduct the M&E vigorously. Regarding the frequency of checking or inspecting the project plan with actual performance of project schedule, finance, quality and overall progress; the finding revealed on average performance comparisons between planned and actual progress are done on a monthly basis.

The finding generated by assessing ERA's strength and weakness in conducting M&E indicates that rigorous measurement and quality assurance work as the major strengths whereas, inadequacy of M&E in impacting project success, weak feedback mechanisms and insufficient scrutiny of its activities as major weaknesses of the organization.

This study also concludes that there is no defined time for the findings of the M&E to translate into improving the projects. Document review, site observation and community discussion are the top three techniques used to collect, manage and analyze data. Regarding monitoring of how project resources like machineries and other equipment are effectively employed to the project activities the findings indicates that there is significant inefficiency and suboptimal use of project machineries and equipment for project purpose.

Regarding the main challenges faced while conducting M&E in ERA, the finding indicates that managerial ineffectiveness or insufficient implementation, inaccuracy in data collection and lack of adequate M&E expertise are the main challenges hampering proper implementation of M&E. This in turn indicates, lack of the necessary leadership and technical M&E expertise in ERA.

5.2. Conclusions

- ERA organizational M&E system has strong documentation and information sharing during M & E process and existence of defined work structure. Meanwhile, M&E of projects to start and finish as per the planned time, cost and quality is seen as an area with considerable weakness.
- The vast majority of respondents agreed that they monitor projects for project improvement followed by accountably to government as the main purpose in mind. Therefore, project improvement and accountability to government drives the motivation for monitoring projects.
- Although there are a wide range of evaluation techniques available, this study indicates that the top four most widely used techniques in ERA are: - Performance indicators, Logical frameworks, Resulted Based Approach and Cost Benefit Analysis. In terms of types of evaluation exercised summative evaluation (end of project) and midterm (interim) evaluation comes at the forefront.
- Although there are trainings provide by ERA on issues related to M&E most of the respondents don't believe that it is adequate to conduct the M&E vigorously.
- The average frequency where comparisons between planned and actual progress of the key project parameters like schedule, finance and quality are done on a monthly basis.
- Gauging the strengths and weakness of the M&E system, rigorous measurement and quality assurance work indicated as the main strengths whereas, inadequacy of M&E in impacting project success, weak feedback mechanisms and insufficient scrutiny of its activities as main weaknesses of the organization.
- Nearly half of all respondents identified as there is no defined time for the findings of the M&E to translate into improving the projects. This introduces randomness and clouds the minimum estimated time period for feedback mechanisms to translate into changes.
- Regarding the tools and techniques use to collect, manage and analyze data, the vast majority of respondents said that document review, site observation and community discussion are the top three methods employed. Use of more technology enabled

approach such as GPS, ArcGIS, google earth, video, audio and mobile data is less frequent implying that M&E is still a labor-intensive undertaking.

- Most of the challenges in proper implementation of M&E originates from managerially ineffectiveness or insufficient implementation, inaccuracy in data collection and lack of M&E expertise. The point here is that two out of the top three challenges to proper implementation M&E trace back to the lack of the necessary leadership and technical M&E expertise in the ERA.

5.3. Recommendations

In light of the support of the summary and highlighted conclusions, the researcher makes the following recommendations to address some of the key findings of the study.

- Although there are a wide range of M&E techniques available it is wise to choose the techniques that best fit in to the ERA context and then standardize and apply the chosen methods.
- ERA need to strengthen the use feedback from M&E into practice through rapid action plans, with systematic and more effective project monitoring practices and systems.
- ERA should expand their use of innovative approaches to M&E, using information and communication technology enabled tools to harness the power of technology to increase the accuracy of data collection, to reduce the costs of gathering real-time data and reduce labor-intensive undertaking.
- Since the average frequency where comparisons between planned and actual progress of the key project parameters like schedule, finance and quality are done on a monthly basis. It is recommended to shorten the duration and make frequent progress checkups.
- Continuous programs to build capacity of both managers and expertise in project management with emphasis on M&E activities helps to overcome some of the main M&E challenges.

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Appendices

Appendix 1: Questionnaire

Addis Ababa University
College of Business and Economics
School of Commerce
Master of Project Management Program

SECTION I: Introduction

The questionnaire is designed to collect data on ***"Assessment of Monitoring and Evaluation Practices of Federal Road Projects.***" The information collected through this questionnaire will be treated with confidentiality and used only for academic purpose, as partial fulfillment for the requirement of master of arts degree in Project Management. Kindly take a moment to answer all the questions as accurate as possible.

Thank you in advance for taking part in this endeavor

Abinet Ergando: 0913-xx-xx--xx or abinet.ed@gmail.com

Direction

- No need of writing your name;
- Put "X" mark in the appropriate space or circle the choice you select whenever necessary;
- If you cannot get any satisfying choice among the given alternatives, you can write your answer, in the space provided for the option ―other, please specify area;
- Consider M&E = Monitoring and Evaluation

Part I: Demographic characteristics of the respondents and general background

1. Name of the organization_____
2. Sex: a) Male b) Female
3. Age: a) 21-30 b) 31-40 c) 41-50 d) above 50
4. Current academic qualification:
   a) PhD. b) MA/MSc c) BA/BSc d) Diploma
5. Position in the organization:
   a) Top management b) Middle management c). Expert/officer
   d) Project manager e) Other expert Specify _____
6. Service year in the organization _____
7. Is there practical experience of monitoring and evaluation system in your organization?
   a) Yes b) No c) Partially
8. Have you been involved in conducting monitoring and evaluation of any project at your organization? a) Yes b) No

Part II: Monitoring and Evaluation Practices and Process

A. Monitoring and Evaluation Organizational System Overview

Instruction: Please read each item carefully and rate using "X" mark.

1. The M&E System of your organization	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
a) Carryout need assessment for all projects	5	4	3	2	1
b) Defined work structure	5	4	3	2	1
c) Allocates resources for M&E	5	4	3	2	1
d) Capacity building scheme for M&E	5	4	3	2	1
e) Clear methods of data acquisition and	5	4	3	2	1
f) Stakeholders involvement in M&E is done consistently at all levels	5	4	3	2	1
g) Documentation and information sharing	5	4	3	2	1
h) Culture of disseminating M&E findings	5	4	3	2	1
i) Projects always start and completed as per the planned time, cost and quality	5	4	3	2	1
j) Policy/legal framework of M&E	5	4	3	2	1
k) Strict reporting of M&E results to appropriate party	5	4	3	2	1
2. The key focus of project monitoring in your organization is?	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
a) Project Improvement	5	4	3	2	1
b) Accountability	5	4	3	2	1
c) Performance management	5	4	3	2	1
d) Impact Measurement	5	4	3	2	1
e) Compliance	5	4	3	2	1
f) Value for Money	5	4	3	2	1
g) Other, please specify	5	4	3	2	1

B. Monitoring and Evaluation plan

Instruction: Please read each item carefully and rate/circle each item according to the practical experience of your organizations.

3. Does your organization have a plan that guides M&E during project implementation?

   a) Yes, for all projects b) Yes, for some projects c) Yes for few projects d) Never

   3.1. If your answer is "Never" for the above question, what is the reason not to have the plan?

   a) It is irrelevant b) Lack of expertise c) Difficult to prepare

   d) Projects are too small e) Not important to us

   f) Other, please specify_____

4. The type of M&E plan, if any, your organization employ is?

   a) Separate

   b) Incorporated within main proposal

   c. Incorporated into the routine work plan of your organization

   d) Other, please specify_____

5. In your organization, project M&E activities have:

   a) A separate budget b) Not separate budget c) I have no idea

6. Which of the following aspects are specified in the plan that guides M&E activities of ERA	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
a) Data to be collected identified	5	4	3	2	1
b) Frequency of data collection defined	5	4	3	2	1
c) Schedule of M&E activities clear	5	4	3	2	1
d) Plan/schedule for dissemination of findings	5	4	3	2	1
e) Resources needed for M&E adequate	5	4	3	2	1
f) Roles and responsibility of staff in M&E clear stated	5	4	3	2	1
g) Projects monitored with plans at inception	5	4	3	2	1
h) Monitoring results aggregated	5	4	3	2	1
i) Monitoring plans integrated with evaluation framework	5	4	3	2	1
j) Others, please identify	5	4	3	2	1

7. Which evaluation techniques does your organization currently use? ***(multiple responses allowed)***							
Techniques	**Yes**	**uncertain**	**No**	**Techniques**	**Yes**	**uncertain**	**No**
a) Logical frameworks	1	2	3	b) Earned value	1	2	3
c) Performance indicators	1	2	3	d) Focus groups	1	2	3
e) Result based approach	1	2	3	f) Baseline studies	1	2	3
g) Social return on investment	1	2	3	h) Theory of change	1	2	3
i) Cost benefit analysis	1	2	3	j) Risk analysis	1	2	3
k) Indirect/proxy indicators	1	2	3	l) Beneficiary feedback	1	2	3
m) Return on investment	1	2	3	n) Other please Specify	1	2	3
o) Participant analysis	1	2	3				

C. Capacity Building

1. Does your organization provide M&E training for Monitoring and Evaluation staff?
   a) Yes, b) No
2. Are there adequate M&E experts at the organization?
   a) Yes, b) No c) Not as expected
3. Do you feel your skills in M&E limit M&E performance?
   a) Yes, b) No
   3.1. Explain why you say so? _____
   _____

D. Project Monitoring and Evaluation Process

1. How often your organization compare planned project activities schedule against actual schedule in order to determine project schedule performance?
   a) Monthly c) Bi-annually e) more than a year time
   b) Quarterly d) Annually f) Never

2. How often does financial performance of the projects is monitored by comparing the planned budget with actual expenditure?

   a) Monthly c) Bi-annually e) more than a year time

   b) Quarterly d) Annually f) Never

3. How often does quality of the projects is monitored by comparing the expected quality standard with actual quality level?

   a) Everyday c) Quarterly e) Annually

   b) Monthly d) Bi-annually f) Never

4. Does your organization normally monitor how project resources of the organization like equipment are effectively employed to the project?

   a. Yes b. No c. partially

5. How often does the overall progress of the projects monitored comparing the planned activities with actual accomplishment is conducted?

   a) Weekly c) Quarterly e) Annually

   b) Monthly d) Bi-annually f) Never

6. How long does it take for the results of M&E to result in improvements in current and future programs?

   a) Less than 3 months c) 6 months – 1year e) More than 2 years

   b) 3 – 6 months d) 1 – 2 years f) No defined time

7. The finance to carry out M&E activities are?

   a) Always adequate c) Rarely Adequate e) I don't know

   b) Adequate d) Never Adequate

8. On average what percentage of the total project budget is allocated for M&E?

   a) Less than 5% b) 5-10% c) More than 10% d) Not specific e) I don't know

9. Which type of evaluation do you frequently carry out on the projects?		**All of the time**	**Sometimes**	**Never**
a)	Ex-ante evaluation (beginning of the project)	1	2	3
b)	Midterm (interim) evaluation	1	2	3
c)	Summative evaluation (end of project)	1	2	3
d)	Ex-post Evaluation (after the end of the project)	1	2	3
e)	Impact evaluation	1	2	3
f)	Sustainability evaluation	1	2	3

10. Which parts of the organization is/are responsible for M&E?		**Yes**	**Partially**	**No**
a)	Independent Evaluation	1	2	3
b)	Self-evaluation by donor	1	2	3
c)	Central Evaluation Team/Department (internal)	1	2	3
d)	Commissioned Consultancy Evaluations	1	2	3
e)	Program Team Evaluations	1	2	3
f)	Other please specify	1	2	3
11. What do you aim to evaluate?		**Yes**	**Partially**	**No**
a)	Outputs,	1	2	3
b)	Outcomes	1	2	3
c)	Impact	1	2	3
d)	Other please specify	1	2	3

12. What would you say are the main strengths and weaknesses of your organizational approach to M&E?	**Major Strengths**	**Strengths**	**No opinion/ uncertain**	**Weaknesses**	**Major Weaknesses**
a) Rigorous Measurement	5	4	3	2	1
b) Timeliness – speed in finding what is not working and working	5	4	3	2	1
c) Feedback mechanisms – findings are effectively translated to changes	5	4	3	2	1
d) Overall levels of investment and frequency – sufficient evaluation activity	5	4	3	2	1
e) Quality assurance – high quality of evaluation work	5	4	3	2	1
f) Level of independence –strong external inspection	5	4	3	2	1
g) Impact for project success – helps projects to always start and completed as per the planned time, cost and quality	5	4	3	2	1

E. Data/Information management

1. What tools and techniques does your organization use to collect, manage and analyze data for M&E purposes? (multiple responses allowed)
   a. Observation
   b. Interview
   c. Questionnaire
   d. Case study
   e. Community discussion
   f. Focus group discussion
   g. Document review
   h. No standard tools/techniques used
   i) GPS, ArcGIS, google earth data
   j) Video, Audio and mobile
2. Does your organization regularly analyze data in order to assess achievements?
   a. Yes b. No c. I have no idea
3. Is there regular M&E information provision to program managers/officers to assist in decision-making and planning? a. Yes b. No
4. Does your organization documents lessons learned on project execution?
   a. Yes b. No c. partially
5. Experience sharing and adoption of best practices in your organization is:
   a) Absent b) Only to some extent c) Well developed d) Unknown
6. How do you disseminate M&E findings? (You can select more than one if you have more than one way of dissemination)
   a. Report for government organ(s)
   b. Stakeholders meetings
   c. Report to beneficiaries
   d. Report to field staff
   e. Internet/website
   f. No dissemination
   g. Others, please specify_____

F. Major Challenges to implement M&E in ERA

1. Rate the possible challenges in M&E activities of projects in your organization

No	Possible challenges	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Inadequate financial resources	5	4	3	2	1
2	Lack of expertise	5	4	3	2	1
3	Uncommitted management	5	4	3	2	1
4	Unavailability of funder	5	4	3	2	1
5	Less involvement of stakeholder	5	4	3	2	1
6	Less involvement of employees	5	4	3	2	1

7	Inaccuracy in data collection	5	4	3	2	1
8	Failure to process and analyze data	5	4	3	2	1
9	Failure in planning	5	4	3	2	1
10	Failure in selecting the correct performance indicator	5	4	3	2	1
11	Failure in evaluation design	5	4	3	2	1
12	Managerially ineffectiveness or insufficient implementation	5	4	3	2	1

2. Please mention any other challenges in monitoring and evaluation of any project in the organization. _____

   _____

3. Please mention any other monitoring and evaluation issues that might not have been covered above. Additional issue:

   _____

   _____

   _____

4. What recommendations would you give to help improve the M&E system of road projects?

   _____

   _____

THANK YOU FOR YOUR COOPERATION!!

Appendix 2: Interview Guide Questions

Addis Ababa University College of Business and Economics

School of Commerce

Project Management Master's Program

Date of Interview: _____

Introduction: Good morning/afternoon

Purpose: This interview is being conducted as part of my research to assess monitoring and evaluation practices on federal road projects. The information supplied will be used for purely and exclusive for academic purpose and will be treated with a lot of confidentiality.

1) What is the total number of: -
    a. Permanent staff your organization has?
    b. employees your organization's M&E unit has?
2) Describe how Monitoring and evaluation systems are executed?
3) Describe some of the tools and methods used in M&E systems?
4) Is there any document or guide book for doing M&E in your organization?
5) Explain some of the ways in which management influences M&E systems?
6) Do you train employees about M&E tools and techniques?
7) Do you involve stakeholders during in M&E activities?
8) What are the challenges of your organization regarding to practices on M&E systems?
9) How can Monitoring and Evaluation be improved in the future?

Thank You!!