ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

The Effects of Monitoring and Evaluation on Project Success in Ethiopian Sugar Development Projects

The Case of Fincha'a Sugar Expansion Project

By

Abayneh Lakew Lemma

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 2022

Addis Ababa, Ethiopia

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Advisor: Dakito Alemu (PhD)

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Statement of Declaration

I, the undersigned, hereby declare that this project work titled *"The Effects of Monitoring and Evaluation on Project Success in Ethiopian Sugar Development Projects: The case of Fincha'a Sugar Expansion Project"* submitted for the award of MA in project management is my original work that it has never been presented to any university and all sources of materials used for this project work have been duly acknowledged.

Abayneh Lakew Lemma

Signature _____

Date _____

Addis Ababa, Ethiopia

Statement of Certification

This is to certify that Abayneh Lakew has undertaken this project work titled "The Effects of Monitoring and Evaluation on Project Success in Ethiopian Sugar Development Projects: *The case of Fincha'a Sugar Expansion Project*" under my guidance. This work is original and acceptable for submission in partial fulfillment of the requirement for the award of a Master's degree in Project Management.

Dakito Alemu (PhD)

Signature_____

Date_____

ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

DEPARTMENT OF PROJECT MANAGEMENT

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Examining Board Approvals

Advisor Dakito A. (PhD) Signature _____ Date _____

Internal Examiner _____ Signature _____ Date _____

External Examiner _____ Signature _____ Date _____

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Table of Contents

List of tables and list of figures

Acronyms/abbreviations

ESC: Ethiopian Sugar Corporation

GTP: Growth and Transformation Plan

GTP I: First Growth and Transformation Plan

GTP II: Second Growth and Transformation Plan

M&E: Monitoring and Evaluation

PMBOK: Project Management Book of Knowledge

CID: Construction Industry Development

FSF: Fincha'a Sugar Factory

WFP: World Food Program

FDRE: Federal Democratic Republic of Ethiopia

Abstract

The purpose of this study is to examine the effects of monitoring and evaluation on project success in Ethiopian sugar development projects for the case of Fincha'a Sugar Expansion Project. The study employed descriptive research design and Data were gathered from both primary and secondary sources. Survey questionnaires were distributed to 47 respondents and collected from 39 samples of respondents by using multi-stage sampling procedures involving purposive, convenience and simple random sampling techniques. Data was analyzed using descriptive statistics with SPSS version 26. Correlation analysis assessed the relationship between challenges of monitoring and evaluation and project success whereas multiple regression analysis assessed the effects of monitoring and evaluation challenges on project success. The descriptive results indicated that institutionalizing monitoring and evaluation system, linking monitoring and evaluation to objectives, data management of monitoring and evaluation, and stakeholders' engagement in monitoring and evaluation are the main challenges to effective monitoring and evaluation in Fincha'a Sugar expansion project. The finding also revealed that two predictor variables, namely, linking monitoring and evaluation to objectives, and data management of monitoring and evaluation had a positive statistical significant effect on project success. The role of institutionalizing monitoring and evaluation system, linking monitoring and evaluation to objectives, data management of monitoring and evaluation, and stakeholders' engagement leaves only 20.9% unexplained. The researcher suggests that there is a need to evaluate other factors that contribute to project success. The p - value of 0.000 (less than 0.05) implies that the model of monitoring and evaluation challenges affecting project success is significant at the 99% confidence level. The researcher also suggests that linking monitoring and evaluation to objectives should be given due recognition for the role it plays in ensuring the success of projects.

Key words: Monitoring and Evaluation, Project Success, Fincha'a Sugar Expansion Project, Ethiopian Sugar Development Projects

Chapter One

1. Introduction

1.1. Background of the Study

Sugar development projects are one of the mega construction projects which were given huge attention since 2010. Hence, the Ethiopian government has funded renovation and new sugar development projects during its first and second Growth and Transformation Plans from 2010/11 to 2019/20 (FDRE, 2010; FDRE, 2016). However, Sugar projects are one of the areas where significant project failures are observed. In both Growth and Transformation Plan (GTP) periods, one of the challenges encountered while implementing the plans was recognized as poor project management - monitoring and evaluation being the center (FDRE, 2016).

According to Chekol & Nuramo (2020), projects are carried out and managed in accordance with the organization's goals and established practices. However, lack of knowledge, economic constraints, leadership and organizational culture, misunderstanding of project management concepts, and a lack of appropriate software were identified as emerging constraints to the development of professional project management practices in Africa (Kissi & Ansah, 2014). In Ethiopia, the level of construction project management practice in terms of adapting general project management procedures, project management functions, tools, and techniques is inadequate (Ayalew et.al 2016). Studies further showed that many projects in third-world countries fail to be successfully completed for a variety of reasons. Among these failures are poor planning of the project implementation process and a lack of understanding of the need for project monitoring and evaluation (Otieno, 2000; Callistus & Clinton, 2018). The World Food Program (WFP), in its analysis of Ethiopia's country strategic plan (2020–2025), acknowledged that the government of Ethiopia faces challenges in the institutionalization and coordination of monitoring, evaluation, accountability and learning systems, including in defining and clarifying roles and leadership, aligning and coordinating among sectors and actors, and building internal staff capacity. WFP further acknowledged that data collection challenges include inadequate staffing, high staff turnover, infrequent and sometimes poor training in data collection and analysis skills, duplication of efforts, delays in data collection and reporting, and limited data verification and validation (WFP, 2020).

Monitoring and evaluation is crucial as it offers unified source of data demonstrating project progress; lets actors to learn experiences from one another, enhancing expertise and knowledge; it generates reports that ensures transparency and accountability, and lets lessons

more easily shared; it reveals errors and provides ways for learning and improvements; it lays foundation for questioning and testing assumptions; it enables organizations to learn from their experiences and incorporate them into policy and practice.; it enables an assessment of the critical link between implementers and beneficiaries on the ground and decision-makers; it contributes to the development and retention of institutional memory (Kabonga, 2018). It is therefore difficult to know whether the intended results are being realized as planned, what corrective action may be desirable to ensure delivery of the intended results, and whether initiatives are making positive contributions toward the successful achievement of project implementation in the absence of good monitoring and evaluation practices (UNDP, 2009).

The aim of this study is therefore to examine the effects of monitoring and evaluation on project success in Ethiopian Sugar Development Projects for the case of Fincha'a Sugar Expansion project.

1.2. Background of Fincha'a Sugar Factory

After Wonji/Shoa and Metahara, Fincha'a Sugar Factory is the country's third-oldest factory that started production in 1998/99 (Chekol & Nuramo, 2020). Following the establishment of the Ethiopian Sugar Development Agency in 2006 with the objective to assist sugar factories in project development, research, training and marketing, Fincha'a Sugar Expansion project was launched in early 2009 to boost its existing sugar production to 270,000 tons of sugar and 20,000 cubic meter of ethanol per year to satisfy the domestic sugar and ethanol demands as well as for any possible export.

As part of the Growth and Transformation Plan accomplishment, the Ethiopian Sugar Corporation (ESC) was established in 2010 as a sole organ for directing, coordinating, supervising, and controlling the expansion of the sugar industry in the country that took over the responsibility of the previous Ethiopian Sugar Development Agency (ESC, 2015). Ethiopian Sugar Corporation (ESC) has therefore dedicated significant financial resources to the expansion/modernization and to the new sugar development projects of the country's sugar industry during GTP I period (Kamski, 2016). Fincha'a Sugar Expansion project was one of the modernization projects of ESC during the start of the period. Till July 2013, however, the average annual production capacity of Fincha'a Sugar Factory has been 110,000 tons of sugar and 8,000 cubic meters of ethanol per year (ESC, 2015).

The contract of the expansion project of Fincha'a Sugar was tied with Overseas Infrastructure Alliance (India) Private Limited (OIA), an Indian EPC contractor with a cost of 124.73 million dollars to be effective in 2009 and to be completed in 2011 (OIA, 2011). The project which was scheduled to be completed and commissioned for 2011/12 sugar production season was delayed till 2013/14 (ESC, 2019). As per the assessment report by Kumar (2015),

the expansion project received around US$ 132 million out of US$ 640 million which was provided for the development of Ethiopian Sugar Industry from India's Development Cooperation through Line of Credit scheme.

1.3. Statement of Problem

Sugar development projects are among the country's mega projects with special attention offered from the outset of both GTP's (2010-2020). It was aimed at contributing to milestone toward realizing Ethiopia's vision of becoming a lower-middle-income country by 2025 (FDRE, 2016). To achieve the goal, the Ethiopian Sugar Corporation has dedicated significant financial resources to the sugar development projects. However, research showed that there existed a gap between theoretical plans and real accomplishments (Kamski, 2016). Despite the government's investment of significant sums to build the country's sugar production capacity, the progress toward reaching the sugar production target of 4.9 million metric tons at the end of GTP II (FDRE, 2016) was far behind the schedule. From FDRE Central Statistics, the actual sugar production of 1,499,134.423 tons (30.6% of the plan) was met at the end of 2019/20 (FDRE, 2019/20, p. 13) with slightly higher than 1,468,915 tons, the actual country's sugar produced at the beginning of GTP I before ten years (FDRE, 2010, p. 12).

When it comes to Fincha'a Sugar Factory, the average annual production capacity has been 110,000 tons of sugar and 8,000 cubic meters of ethanol per year until July 2013 (ESC, 2015). The project which was scheduled to be completed and commissioned for 2011/12 sugar production season was delayed till 2013/14 (ESC, 2019). An assessment also reported that the expansion project of Fincha'a Sugar Factory received around USD 132 million out of USD 640 million which was provided for the development of Ethiopian Sugar Industry from India's Development Cooperation through Line of Credit scheme (Kumar, 2015). This indicates that the project was completed with cost and time overrun beyond the original contract.

It is mentioned in the plan that an amount of more than 660 million USD was planned to earn from sugar by the end of the first GTP period but the performance remained far below the planned target. Among the challenges and limitations identified while assessing the first GTP which later called for further attention in the second GTP period was poor project management – monitoring and evaluation being the center (FDRE, 2016). It is further stated in the plan that Ethiopia's monitoring and evaluation system is based on the sectoral approach to follow up on government policies and strategies (FDRE, 2010) and hence is top-driven at the macro/strategic/sectoral level, perhaps not decentralized at the micro level. Information at the gross root (project level) may not be organized so effectively. This kind of challenge

arises from lack of a clear link between objectives and the type of data that needs to be collected and analyzed through monitoring and evaluation. The lack of clear objectives and the absence of clear key indicators will then limit the ability of monitoring and evaluation practices to provide critical assessments for decision-making, accountability, and learning purposes (Gudda, 2011). As per the WFP, the government of Ethiopia faces challenges in the institutionalization and coordination of monitoring, evaluation, accountability, and learning systems, including defining and clarifying roles and leadership, aligning and coordinating among sectors and actors, and building internal staff capacity. Not only these, WFP acknowledged that data collection including inadequate staffing, high staff turnover, infrequent and sometimes poor training in data collection and analysis skills, duplication of efforts, delays in data collection and reporting, and limited data verification and validation are among the challenges (WFP, 2020).

Different researches and organizations explain how project monitoring and evaluation exercise increases the overall efficiency of project planning, management, and successful implementation by offering corrective action to the variances from the expected standard. (Pauline & Mulyungi, 2016). Monitoring and evaluation are powerful management tools that can help a government and state institutions improve the way tasks are performed in order to achieve a country's vision and mission. To ensure that strategic, tactical, and operational decisions are more relevant, the data and evidence that the government and state institutions require to make decisions, implement policy, and hold officials accountable should be derived from a results-based performance feedback system (Mackay, 2007). However, monitoring and evaluation is identified to be one of the challenges that the government of Ethiopia faced during implementation of construction projects in the GTP periods.

Most studies conducted are on M&E of non-industrial construction projects like residential, commercial and infrastructure construction projects (Ayalew et al, 2016; Mengistu & Mahesh, 2019). Hence, little has been known about M&E of industrial construction, especially Sugar Development Projects in Ethiopia.

With these driving facts, this research examines the effects of monitoring and evaluation on project success of Fincha'a Sugar Expansion project as a case project for other sugar development projects.

1.4. Research Questions

Given the problem statements discussed above, the study aims to specifically answer the following research questions:

a) How have project monitoring and evaluation systems practiced for Fincha'a Sugar expansion project?

b) What were the challenges of monitoring and evaluation that influenced project success of the expansion?
c) What were the effects of monitoring and evaluation on project success of the expansion?

1.5. Objectives of the Study

1.5.1. General Objective

The primary intention of this study was to examine the effects of monitoring and evaluation on project success in Ethiopian Sugar Development Projects for the case of Fincha'a sugar expansion project.

1.5.2. Specific Objectives

To this end, three specific objectives were outlined for the study; which were:

a) To assess the monitoring and evaluation processes practiced in Fincha'a Sugar expansion project.
b) To identify challenges of monitoring and evaluation that influenced project success of Fincha'a Sugar expansion.
c) To examine the effects of monitoring and evaluation on project success of the expansion.

1.6. Significance of the Study

The aim of this study was to examine the effects of monitoring and evaluation on project success in Ethiopian Sugar Development Projects and was carried out on Fincha'a Sugar expansion project as a case study for the above specific objectives. Therefore, the results of this study can serve as a guideline to all monitoring and evaluation stakeholders of sugar development projects to establish best monitoring and evaluation practices so that the projects implemented under the Ethiopian Sugar Corporation will be successful.

The results of the study will also assist in making awareness of the challenges of monitoring and evaluation processes, their necessity, and their effect on project success.

Last but not least, the findings of this study may help researchers who make an in-depth study on this particular subject matter and related cases.

1.7. Scope and Limitation of the Study

This study was mainly concerned with a step-by-step approach to examine the effects of monitoring and evaluation on project success of Fincha'a Sugar expansion which was executed between 2008/2009 and 2013/2014. Investigating and reaching towards effects of monitoring and evaluation on project success of sugar-based industrial construction is

difficult to accomplish completely on time. The scope of this study is therefore limited to assessment, identification, interpretation, description, and examination of the effects of monitoring and evaluation on project success of Fincha'a Sugar expansion project considering the availability of the data to be analyzed.

1.8. Definition of Concepts and Terms

Monitoring: A process of collecting project performance data, producing performance measures, and reporting and disseminating performance information (PMI, 2017). It is the process of regularly observing and recording the activities taking place in a project at all levels of management to ensure that the input deliveries, work schedule, targeted program, and all other activities are proceeding as planned. Monitoring involves a systematic and purposeful observation of all ongoing processes in the project.

Evaluation: The process of assessing whether the project's immediate objective (ongoing or completed) is being met or it is contributing to the achievement of the objective. The goal is to determine the relevance and realization of objectives, developmental efficiency, effectiveness, impact, and sustainability. Evaluation should provide credible and useful information, allowing for the incorporation of lessons learned into decision-making (IFRC, 2002).

Monitoring and Evaluation (M&E): Monitoring and evaluation is an embedded concept and constitutive part of every project. Monitoring is integral to an evaluation in general. The data acquired through monitoring processes are used for evaluation.

Practice: A specific type of professional or management activity that contributes to the execution of a process and that may employ one or more techniques and tools (PMI, 2017, p. 698).

Lesson learned: A learned lesson is a useful analogy based on experience that applies to a general situation rather than a specific situation. It is gaining knowledge through experience (UNDP, 2002).

Project: It is a temporary endeavor undertaken to create a unique product, service, or result in which a unique product can be either a component of another item, an enhancement or correction to an item, or a new end item in itself. And a unique service is the capability to perform a service. And a unique result refers to an outcome or document (PMI, 2017).

Project success: Project completion within scheduled time, completion within reasonable cost and within budget, quality achievement, meeting of technical requirement, project achieving user satisfaction and achievement of organizational objectives

Project management: is the discipline of initiating, planning, executing, controlling, and closing a project in order to achieve specific goals and meet specific success criteria through the application of knowledge, skills, tools, and techniques to project activities (PMI, 2017).

Monitoring and Controlling Process Group: Processes needed to track, review, and regulate the project's progress and performance; identify areas where changes to the plan are needed; and initiate the necessary changes. (PMI, 2017).

1.9. Organization of the Study

This study was structured into five chapters. In *chapter one*, an introductory portion which includes background of the study, problem statement, research questions, and study purpose was allocated. *Chapter two* addressed a review of related literature, which covers both theoretical and empirical literature. The research design and methodology for the achievement of the study objectives were discussed in chapter three. *Chapter four* contained the analysis of results and the discussion portion. *Chapter five* discussed the research's conclusion, suggestions, and recommendations based on the main findings.

Chapter Two

2. Review of Related Literature

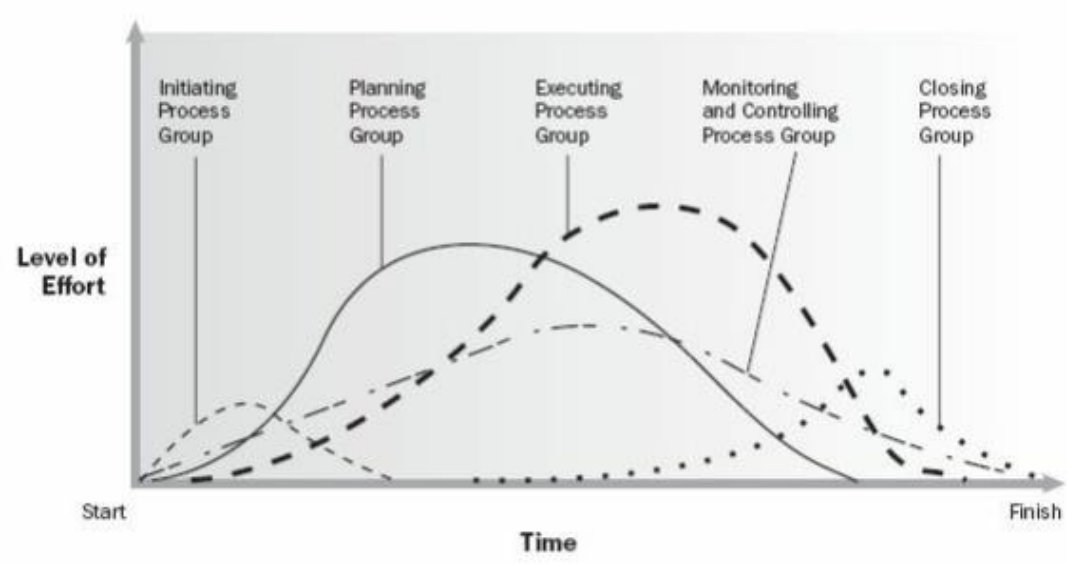
2.1. Theoretical Review

2.1.1. Monitoring and Evaluation: an overview

In comparing monitoring and evaluation definitions, it is obvious that they have distinct functions and roles to play in the life cycle of project delivery, yet complementary (Callistus & Clinton, 2018).

In reference to PMBOK Guide, monitoring and evaluation system is defined in terms of Monitoring and Controlling Processes considering similar description of their roles and functions in project management as a process of tracking, reviewing, regulating the progress to achieve performance objectives, identifying any areas in which changes to the plan are required; and initiating the corresponding changes. The integrative nature of project management for the application of its iterative processes requires the Monitoring and Controlling Processes to interact with other Process Groups of project management. Thus, the Monitoring and Controlling Process is taken as a linking Process Group for the rest Process Groups (PMI, 2017) as shown in Figure 1.

***Figure 1**: Process Group Interactions Within a Project Phase. Source.*



Source: *(PMI, 2017, p. 533)*

Kusek & Rist (2004) highlights the different - yet complementary - roles that results-based monitoring and evaluation play in M&E systems as in Table 1.

***Table 1**: Complementary Roles of Results-Based Monitoring and Evaluation.*

Monitoring	**Evaluation**
Clarifies program objectives	Analyses why intended results were or were not achieved
Links activities and their resources to objectives	Assesses specific causal contributions of activities to results
Translates objectives into performance indicators and sets targets	Examines implementation process
Data on the indicators are collected on a regular basis, and actual results are compared to targets.	Explores unintended results
Reports progress to managers and alerts them to problems	Offers lessons, highlights major accomplishment, and provides recommendations for improvement

Source: Kusek & Rist (2004), Callistus & Clinton (2018), (Bakewell et.al, 2003).

Monitoring and evaluation are integrally linked; that is, monitoring typically provides data for evaluation, and evaluation elements occur when monitoring. The monitoring and evaluation process begins by measuring actual performance, which is then compared to planned performance. If there is a deviation, the causes will be investigated, and remedial action will be developed and implemented to correct the deviation. This process will be repeated until no more deviation exists by measuring revised performance and comparing it to planned activities (Ritz & Levy, 2013).

The combined efforts of monitoring and evaluation strive to promote efficient and effective use of resources and processes throughout the project life cycle in order to achieve successful project delivery.

Monitoring and evaluation is the process of continuously gathering and analyzing information in order to determine whether progress is being made toward pre-specified goals and objectives, as well as to identify any unintended (positive or negative) consequences of a project and its activities.

Timely and reliable M&E provides information to:

- Support implementation of project with precise, evidence-based reporting that updates management and decision-making in order to guide and improve project performance.
- Reflect on and share experiences and lessons to contribute to organizational learning and knowledge sharing.
- Maintain accountability and compliance by demonstrating whether or not project work was completed as agreed, in compliance with established standards, and in accordance with customer requirements.
- Provide opportunities for stakeholder feedback,

- Promote and celebrate project work by outlining accomplishments and achievements, strengthening self-esteem, and enabling resource mobilization.
- Provide information to strategic management to help them set and adjust goals and strategies.
- Build the beneficiaries' and implementing staff's capacity, self-reliance, and confidence in order to effectively initiate and implement development initiatives.

Monitoring

Monitoring is a continuous process of gathering, analyzing, documenting, and reporting data on progress in order to meet predetermined project objectives. It helps identify trends and patterns, adapts strategies, and informs decisions for project or program management. (IFRC, 2011). Monitoring provides descriptive information on the progress of work at any given time in relation to the planned targets and outcomes (Kusek & Rist, 2004).

Monitoring keeps track of how program performance or key outcomes change over time. It has the following features:

- Will be carried out continuously
- Keeps track and maintains oversight
- Documents and analyzes progress against planned project activities
- Focuses on program inputs, activities, and outputs
- Examines project implementation processes
- Considers project results at the output level
- Considers continued relevance of project activities
- Reports on project activities that have been implemented
- Reports on immediate results that have been achieved

Common types of monitoring (IFRC, 2011)

- **Results monitoring**: Tracks effects and impacts to determine whether the project is on track to achieve its envisioned results (inputs, activity, outputs, outcomes, impact, risks monitoring) and whether there are any unintended consequences (positive or negative)
- **Process (activity) monitoring**: Tracks how inputs and resources are used, how activities progress, how activities are delivered – time and resource efficiency, and output delivery

- **Compliance monitoring**: Ensures adherence to regulations, laws and expected outcomes, grant and contract requirements and ethical standards.
- **Context (situation) monitoring**: Tracks the setting in which the project operates, especially as it affects identified risks and assumptions, and any unexpected considerations that may arise, including the larger political, institutional, funding, and policy context that affects the project.
- **Beneficiary monitoring**: Tracks beneficiary perceptions of a project. It includes beneficiary satisfaction or complaints with the project, including their participation, treatment, access to resources and their overall experience of change.
- **Financial monitoring**: Accounts for costs by input and activity within predefined categories of expenditure, to ensure implementation is according to the budget and period.
- **Organizational monitoring**: Tracks the sustainability, institutional development, and capacity building in the project.

Evaluation

A periodic assessment of an ongoing or completed project that is as systematic and objective as possible. It entails collecting, analyzing, interpreting, and reporting on credible data. The goal is to assess the relevance and achievement of objectives, as well as the developmental efficiency, effectiveness, impact, and sustainability. Evaluation gives evidence of the extent to which targets and outcomes are being achieved and it mainly seeks to address issues of causality (Kusek & Rist, 2004).

It has the following characteristics:

- Will be conducted at important program milestones
- Provides in-depth analysis
- Compares planned with actual achievements
- Looks at processes used to achieve results
- Considers results at outcome level and in relation to cost
- Considers overall relevance of program activities
- References implemented activities
- Reports on how and why results were achieved
- Contributes to building theories and models for change
- Attributes changes in program outcomes and/or impact to program inputs and outputs.

Types of Evaluations - classified based on three ways (IFRC, 2011)**:**

a) When it is done - Ex-ante evaluation; Formative evaluation; Summative, and Ex-Post evaluation.
b) Who is doing it - External evaluation, Internal evaluation or self-assessment
c) What methodology or technicality is used- Real-time evaluations (RTEs); Meta-evaluations; Thematic evaluations; Cluster/sector evaluations; Impact evaluations

The details are as follows (IFRC, 2011; UNDP, 2009)**: -**

- ✓ **Ex-ante evaluation**: Conducted before the implementation of a project as part of the planning.

  A needs assessment investigates who requires the project, the amount of the need, and what might work to meet the need. Implementation (feasibility) evaluation monitors the fidelity of the program or technology delivery, and whether or not the program is realistically feasible within the programmatic constraints.
- ✓ **Formative evaluation**: Conducted during the implementation of the project. Used to determine the efficiency and effectiveness of the implementation process, to improve performance, and to assess compliance. Provides information to improve processes and learn lessons.

  Process evaluation looks into the project delivery process, including alternative delivery methods. Outcome evaluations look into whether the project had measurable effects on specific target outcomes. Midterm evaluations are formative in nature and take place halfway through implementation.
- ✓ **Summative evaluation**: Conducted at the end of the project to assess the state of project implementation and achievements at the end of the project. Collaborate lessons on content and implementation process. Occur at the end of project implementation to assess effectiveness and impact.
- ✓ **Ex-post evaluation**: Conducted after the project is completed. Used to assess the sustainability of project effects, and impacts. Conducted somewhere after implementation to assess long-term impact and sustainability.
- ✓ **External evaluation**: As part of a contractual agreement, the donor initiates and controls the evaluation. Independent people who are not involved in implementation conduct it. Often guided by project staff
- ✓ **Internal or self-assessment**: Internally guided reflective processes. Initiated and controlled by the group for its own learning and improvement. Sometimes it is

done by consultants who are outsiders to the project. Need to clarify ownership of information before the review starts

- ✓ **Real-time evaluations** (RTEs): are undertaken during project implementation to provide immediate feedback for changes to improve ongoing implementation.
- ✓ **Meta-evaluations**: are used to assess the evaluation process itself. Some key uses of meta-evaluations include taking inventory of evaluations to inform the selection of future evaluations; combining evaluation results; checking compliance with evaluation policy and good practices; assessing how well evaluations are disseminated and utilized for organizational learning and change, etc.
- ✓ **Thematic evaluations**: focus on one theme, such as gender or environment, typically across a number of projects, programs, or the whole organization.
- ✓ **Cluster/sector evaluations**: focuses on a set of related projects, typically across sites that are implemented by multiple organizations
- ✓ **Impact evaluations**: is broader and assesses the overall or net effects - intended or unintended - of the program or technology as a whole focus on the effect of a project/program, rather than on its management and delivery. Therefore, they typically occur after project completion. However, the impact may be measured during project/program implementation during longer projects and when feasible.

Evaluation Criteria for Projects (UNDP, 2009)**:**

- ✓ **Relevance** - The validity of the Overall Goal and Project Purpose at the evaluation stage.
- ✓ **Effectiveness** - The degree to which the Project Purpose has been achieved by the project Outputs.
- ✓ **Efficiency** - The productivity in project implementation. The degree to which Inputs have been converted into Outputs.
- ✓ **Impact** - Positive and negative changes produced, directly or indirectly, as a result of the implementation of the project.
- ✓ **Sustainability** – The durability of the benefits and development effects produced by the project after its completion.

2.1.2. Monitoring and Evaluation System

According to Tengan et.al (2021), "M&E system is a set of organizational structures, management processes, plans, indicators, information systems, reporting lines and standards that ensure that projects are implemented effectively." The system aids in checking progress, ensuring efficient and effective utilization of project resources as

well as the relationship between the project and M&E team. It also serves as a guide to facilitate the process of data collection, analysis, and reporting based on agreed performance indicator benchmarks.

Types of M&E Systems

Kusek and Rist (2004) identified two types of M&E systems: implementation-based M&E systems and results-based M&E systems, which are explained further below.

☞ **Implementation-focused M&E system**

The implementation of M&E is focused on how well the project or program is being executed. Unfortunately, this approach to M&E provides little information to stakeholders and the M&E team on the understanding of how the project achieved success or failure. The data collected during the implementation-focused M&E covers the inputs that have been provided, activities being undertaken, and the output as seen. Also, M&E reports capturing the provision and utilization of the project inputs and the production output (Tengan et.al, 2021).

☞ **Results-based M&E system**

This system is a work-in-progress system that is used by project and program implementers to track progress and validate the impact of the project or program. The project's outcome and impact on the end-users are more important. Continuous commitment of time, efforts, and resources is required to develop and maintain an effective results-based M&E system (Kusek & Rist, 2004).

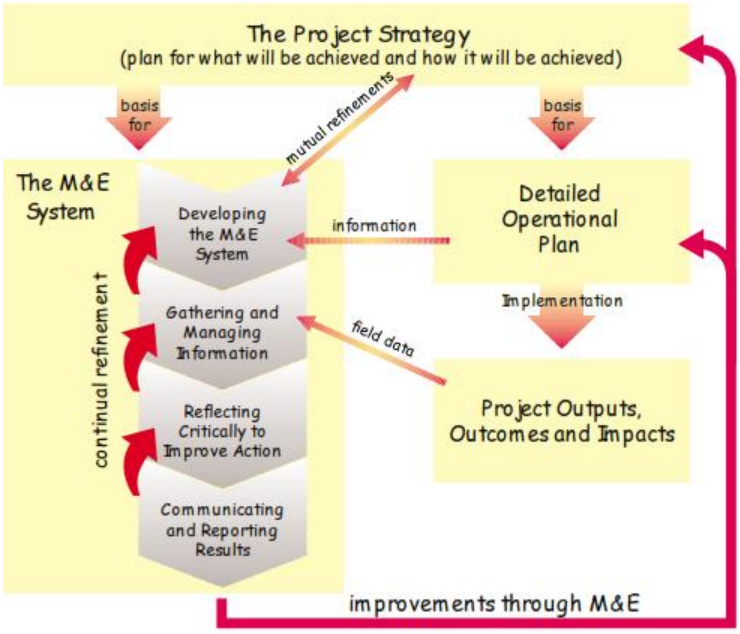
Steps in developing a monitoring and evaluation system

Different scholarly works and studies show varying steps and sequences for developing an M&E system (Kusek & Rist, 2004; Montigoe, 2012; Guijt & Woodhill, 2002). This implies that there is no one method for designing and developing an M&E system.

Guijt and Woodhill (2002) outlined four steps in an M&E process and detailed how it is linked to the project strategy and operations. These steps are illustrated in Figure 2 and are also considered for this study.

- ✓ Developing the M&E system,
- ✓ Gathering and managing information,
- ✓ Reflecting critically to improve actions and
- ✓ Communicating and reporting results.

***Figure 2**: The M&E system, its links to the project strategy and operations.*



Source: (Guijt & Woodhill, 2002)

Monitoring and Evaluation Planning

An M&E plan is necessary for every project. However, different literatures recommend different propositions about where to begin an M&E planning in the project lifecycle stages.

As per PMBOK, Monitoring and Controlling Process Group is taken as a linking process group from project Initiating Process Group to project Closing Process Group (Figure 1) and hence an M&E planning starts from project initiating stage (PMI, 2017).

Monitoring & evaluation planning should begin concurrently with or immediately following the project design stage. Early planning will inform project design and provide enough time to organize resources and personnel prior to project implementation. M&E planning should include those who use the M&E system. The involvement of project staff and key stakeholders ensures the M&E system's feasibility, understanding, and ownership (Bakewell et.al, 2003).

An M&E plan is a central document that details the project's objectives and the interventions developed to achieve these goals (Frankel et al., 2007). It also outlines the procedures that will be used to ensure that the goals are met. The authors believe that the M&E plan should be developed after the planning stage but before the design phase of the project.

Data management for M&E

M&E data management is concerned with how M&E data is collected, analyzed, and reported in order to guide post-M&E project decisions. According to Micah & Luketero (2017), M&E data management entails collecting data, verifying it, analyzing it, and reporting the results, whereas M&E data management decisions entail selecting appropriate data management tools, ensuring quality data collection, processing, and reporting.

Okello (2021) distinguishes three levels of M&E data management: (1) baseline M&E data management, earlier assessment of project execution to confirm project viability; (2) impact M&E data management, evaluates how changes affect project stakeholders and the project environment; and (3) compliance M&E data management, evaluates a project to determine if it continues to meet the project requirements in accordance with standards and legal regulations.

2.1.3. Frameworks for Monitoring and Evaluation

A monitoring and evaluation framework that generates knowledge, promotes learning, and guides action is, in its own right, an important means of capacity development and sustainability of national results (UNDP, 2002).

Frankel & Gage (2007) and other authors revealed that there is no one perfect framework and no single framework is appropriate for all situations, but four types of frameworks dominate and are discussed here:

a) **Conceptual frameworks**: known to be theoretical or research frameworks. Typically shown as diagrams and are useful for identifying and illustrating the factors and relationships that influence the outcome of a program or projects.
b) **Results-based frameworks**: known to be strategic frameworks and serve as a management tool with an emphasis on results.
c) **Logical frameworks**: known to be LogFrames and are commonly used to help set clear program objectives and define indicators of success. They also outline the critical assumptions on which a project is based, similar to the results framework.
d) **Logic models**: known to be M&E frameworks, commonly used to present a clear plan for the use of resources to meet the desired goals and objectives. They provide a streamlined linear interpretation of a project's planned use of resources and its desired ends.

The choice of a particular type of framework depends on the program's specific needs, the M&E team's preferences, and fund provider's requirements.

2.1.4. *Institutionalizing Monitoring and Evaluation*

According to Hlatshwayo & Govender (2015), institutionalization is used to pursue good governance and meaningful project implementation, as well as to build institutional capacity, increase skills, and to develop processes, structures, and systems.

Mackay (2006), expressed institutionalization of M&E as the "… creation of an M&E system, which produces monitoring information and evaluation findings, which are judged valuable by key stakeholders, which are used in the pursuit of good governance, and where there is sufficient demand for the M&E function to ensure its funding and its sustainability for the foreseeable future." When M&E is institutionalized, it becomes an integral part of the development program which leads to improved planning, policy-making, and achievement of objectives (Sivagnanasothy, 2010).

When M&E system is institutionalized well, coordination of monitoring, evaluation, accountability and learning systems, including defining and clarifying roles and leadership, aligning and coordinating among sectors and actors, and building internal staff capacity is harmonized.

2.1.5. *Monitoring and Evaluation Best Practices*

In reference to Mackay (2007), consciously looking to adopt world best practice approaches influence developing countries. As noted in the author's findings, this can be a dangerous concept for M&E systems because of the need to tailor them closely to country circumstances and priorities.

Once existing M&E functions are diagnosed and well performing M&E systems in linear manner are developed, M&E practices have huge advantage for the successful achievement of project objectives. According to Tengan et.al (2021), an effective M&E practice ensures a healthy project implementation environment where project objectives such as cost, time and quality are achieved; organizations are afforded with the opportunity to learn from previous practices to help improve current and future project implementation and better decision making; all stakeholders are well represented on the project and given the opportunity to contribute to the project; and scarce project resources are committed to prudent use.

The overall best practices of M&E summarized in IFRC (2011) and other literature (say, Mathis et.al (2001)) are highlighted here under which may be adapted for industrial construction projects in Ethiopian context.

- Monitoring data should be ***well-focused*** on specific audiences and uses (only what is necessary and sufficient).

- Monitoring should be ***systematic***, based upon predetermined indicators and assumptions.
- Monitoring should also look for unanticipated changes in the project/ program and its context, including any changes in project/program assumptions/risks; this information should be used to ***adjust*** project/program implementation plans.
- Monitoring needs to be ***timely***, so information can be readily used to inform project/program implementation.
- Whenever possible, monitoring should be **participatory**, involving key stakeholders – this can not only reduce costs but can build understanding and ownership.
- Monitoring information is not only for project/program management but should be **shared,** when possible, with beneficiaries, donors, and any other relevant stakeholders.
- ***Linking*** the M&E Plan to the Strategic Plan and Workplan - M&E plan should be linked to the program's strategic plan and workplan in an integral manner.
- Emphasizing ***efficiency*** and ***cost-effectiveness*** - the most notable aspects of the M&E plan should be its speed, modest cost and simplicity.
- Facilitating ***use of data for program improvement*** - M&E plan yields "living data" by setting up structures to facilitate the use of data for rapid program improvement.
- Promoting ***sustainability*** – M&E activities are being transferred over to future projects, so that M&E exercises can be continued after the current project phase-out.

2.2. Empirical Review

Industrial construction projects often require materials and workmanship that fall outside the scope of traditional commercial, residential and infrastructure construction projects. Additional standards and logistics, custom fabrication, on-site equipment assembly and large-scale installations are just a few of the factors that make industrial project management challenging[1] and hence monitoring and evaluation practices. The researcher has not come across studies published on monitoring and evaluation practices or challenges affecting those practices for industrial construction projects in the Ethiopian context. Most of the available studies are conducted on commercial, residential, and infrastructure construction projects; and the rest on donor-funded projects. Hence, a review of a broader study on construction project E&M practices in Ethiopia is made, following reviews of research from other developing and fellow African countries.

[1] 5 Key Differences Between Commercial and Industrial Construction (nationwideconstruction.com)

2.2.1. Monitoring and Evaluation Practices

A study of Assessment on Performance and Challenges of Ethiopian Construction Industry undertaken by Ayalew et.al (2016) found that the project management practice in Ethiopia is far behind those poor performing developing countries in Africa. The findings in that study discovered the level of management practice of construction project in terms of adapting general project management procedures, functions, tools and techniques is unsatisfactory. The challenges to the construction industry in Ethiopia were also identified by the assessment to be schedule slippages, poor quality, improper procurement systems, failure to handle project requirements, and the inability to adopt best practices. A ranking analysis of the challenges revealed time, cost, and risk are the top three challenges.

Mengistu & Mahesh (2019) conducted a study on Challenges in Developing the Ethiopian Construction Industry and identified four major factors that make construction industry development (CID) a challenging and long-term activity: (1) delay in CID policy implementation and corruption from role of government; (2) weak capacity of contractors and consultants from resource related variables; (3) lack of collaboration and Professionalism from the nature of the industry; and (4) lack of benchmarking CID practice from the nature of the industry. They concluded that the challenges are interrelated and that overcoming them in the industry requires a collaborative effort from the stakeholders, with primary commitment from the government as the government is the biggest client, promoter and regulator of the industry. The findings show potential areas of intervention for improvement. The researchers also advocated the establishment of mandated institutes to help the industry develop through adopting best management practices.

Callistus & Clinton (2016) found out that the implementation of monitoring and evaluation in the Ghanaian construction industry was facing numerous challenges and as a result, the industry was performing poorly. They identified and evaluated the barriers met by projects to implement M&E in the construction industry. Weak institutional capacity, limited resources and budgets for M&E, the weak link between planning, budgeting and M&E, weak demand for and utilization of M&E results, and poor data quality, gaps and inconsistencies were identified as the most significant barriers in implementing project M&E in construction projects. In their 2018 extensive desk review for the role of M&E throughout the life cycle of project delivery, they also noted that the practice of M&E appeared to be side-lined whereas other project management areas were given much attention. They concluded that effective M&E has critical role in improving construction project implementation if adequate resources, technical capacity building, a conducive project environment are provided and participation of stakeholders in M&E activities is ensured. The authors further advised project managers to consider, plan and implement M&E from inception to completion of projects to

reduce the risk of re-work and thereby reducing project cost and time. This advice is in line with that of other literature that planning for M&E to be included from inception to closeout of projects. The researchers argued that despite such challenges, projects are completed to quality, cost, schedule, health and safety regulations and to the satisfaction of stakeholders under all such challenges.

2.2.2. Project Success

Different researchers interpret project success differently. The simplest way of defining a project as successful is to show that three primary objectives have been met and are: time, cost, and specification (Chekol & Nuramo, 2020). However, a number of researchers define project success in terms of dimensions of time, cost, quality, scope, stakeholder's satisfaction, etc. (Bodicha 2015; Morteza & Kamyar 2009; Sudhakar 2016, PMI 2017). Among these factors, time, cost, quality and stakeholders' satisfaction were identified and selected as the most important indicators for measurement of project success (Al-Shaaby & Ahmed, 2018).

Kamau & Mohamed (2015) made an empirical review of previous research to study the Efficacy of Monitoring and Evaluation in Achieving Project Success in Kenya. The researchers reviewed researches that aimed to determine the critical success factors (CSFs) that contribute to project success. They found that M&E function was one of the CSFs that consistently appeared and that project success was a result of effective M&E.

2.2.3. Research Gap

Table 2 presents a short and summarized description of the findings and gaps in studies conducted in Ethiopia, and fellow African countries on the issue that this research is concerned with.

***Table 2**: Findings and Gaps in Studies*

No	**Topic**	**Author (s) & year**	**Summary of Findings**	**Gaps Identified**
1	Assessment on Performance and Challenges of Ethiopian Construction Industry	Ayalew et al (2016)	The researchers showed that the level of construction project management practice in terms of adapting general project management procedures, project management functions, tools, and techniques is unsatisfactory.	The researchers did not forward any policy recommendations where effective M&E should be emphasized.
2	Challenges in Developing the Ethiopian Construction Industry	Mengistu & Mahesh (2019)	The researchers advocated the establishment of mandated institutes to help the industry develop through adopting best management practices.	Adopting best practices is a dangerous concept for M&E systems because of the need to tailor them closely to country circumstances and priorities (Mackay, 2007).
3	Growth and Transformation	FDRE (2010)	In the plan, it was stated that Ethiopia's monitoring and evaluation	M&E system which bases on the sectoral

No	Topic	Author (s) & year	Summary of Findings	Gaps Identified
	Plan I (2010/11-2014/15)		system is based on the sectoral approach (at strategic level)	approach perhaps caused lack of clear link between M&E and objectives at strategic and project levels.
4	Ethiopia's country strategic plan (2020–2025)	WFP (2020)	Acknowledged that the government of Ethiopia faces challenges • in the institutionalizing M&E including defining and clarifying roles and responsibilities, aligning and coordinating among sectors/actors, and building internal staff capacity. • in data management of M&E including inadequate staffing, high staff turnover, poor training in data collection and analysis skills, delays in data collection and reporting, and limited data verification and validation	The extent of effects of the challenges on project success was not measured and defined in the analysis of the plan.
5	Evaluating Barriers to Effective Implementation of Project Monitoring and Evaluation in the Ghanaian Construction Industry	Callistus and Clinton (2016)	The researchers identified weak institutional capacity, limited resources, and budgetary allocations for monitoring & evaluation; weak linkage between planning, budgeting, and M&E; weak demand for and utilization of monitoring and evaluation results and poor data quality, gaps, and inconsistencies were the most significant barriers in the implementation of project M&E in Ghana construction projects.	The researchers argued that despite such challenges, projects are completed to quality, cost, schedule, health, and safety regulations, and to the satisfaction of stakeholders questioning the possibility of efficacy of M&E in achieving project success (Kamau & Mohamed, 2015).
6	The Role of Monitoring and Evaluation in Construction Project Management	Callistus and Clinton (2018)	Limited financial resources for M&E, weak institutional capacity of M&E departments or teams, and the weak linkage between project planning and M&E are among the biggest challenges to M&E. The practice of monitoring and evaluation were side-lined	

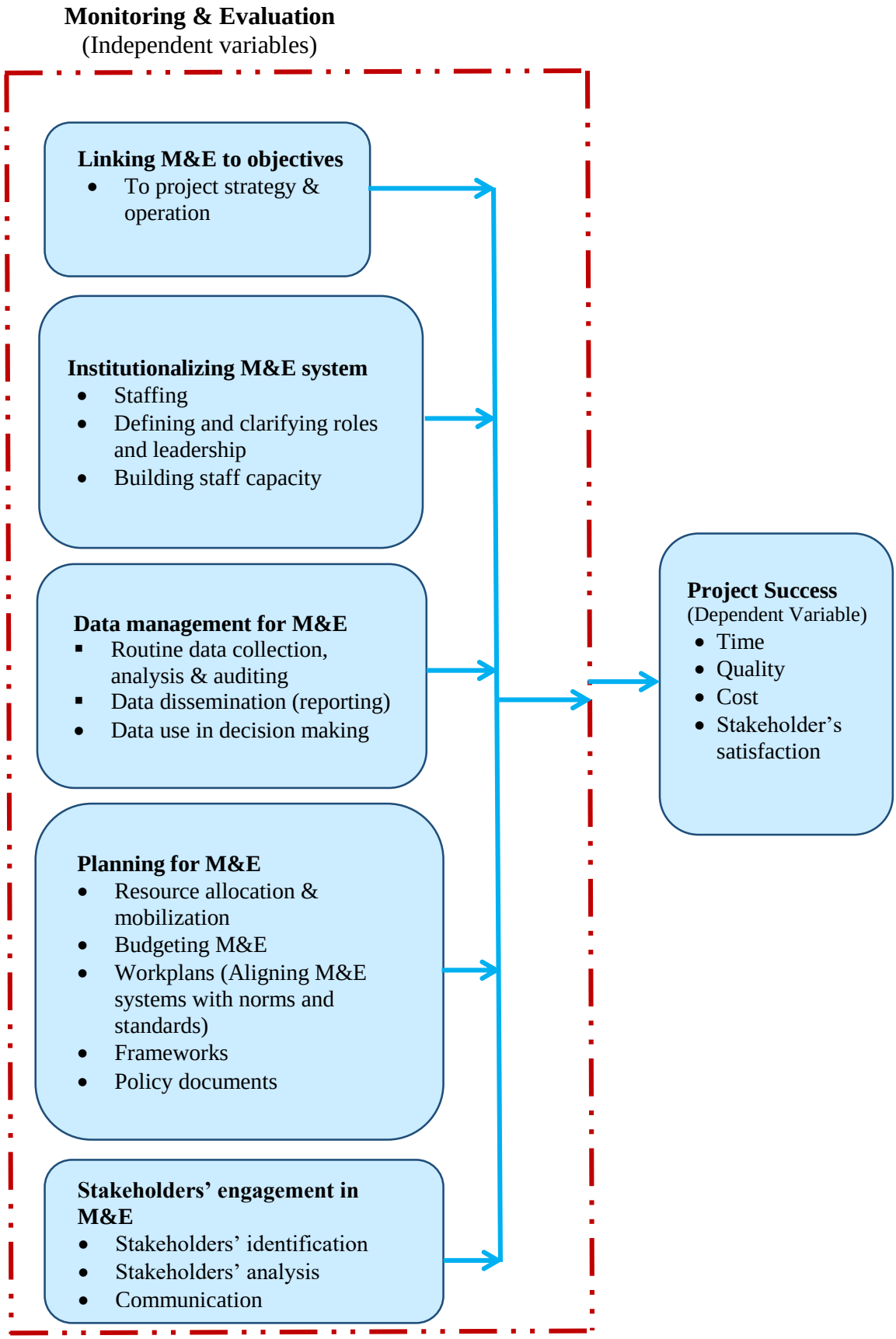
Source: Own literature review, 2022

2.3. Conceptual Framework/Summary of Literature Review

Despite scholarly consensus that proper M&E leads to successful achievement of project delivery, there are still delays and failures in Ethiopian sugar development projects.

On the basis of the review of literature explained in the previous sections, the conceptual framework proposed is a combination of those findings to be grouped and arranged into a framework that guides this research in an attempt to provide a solution to the research problem. The conceptual framework proposed is illustrated as in Figure 3.

***Figure 3**: Conceptual Framework.*



Source: Own work, 2022: adapted from different literature

Chapter Three

3. Research Methodology

3.1. Research Design

The study took the form of descriptive study design. According to Kothari (2004) and Brown and Dowling (1998), descriptive research finds out who, what where, when and how much. The Research design was appropriate to identify challenges of monitoring and evaluation that influence project success. Similar research designs evaluated challenges of monitoring and evaluation practices and project success. This study established the monitoring and evaluation factors affecting the success of Fincha'a Sugar expansion project. The descriptive design provided quantitative data from the population and insighted to research problem whilst highlighting the relevant variables.

3.2. Population and Sampling Techniques

The monitoring and evaluation work was mainly indebted to the consultant staff and its counterpart office, Project Follow up Division. However, reaching out the foreign consulting staff which they already completed the project and left could be difficult. The study's target population was therefore, drawn from the operating organization which was involved in and contributed to the monitoring and evaluation of Fincha'a Sugar Expansion Project from inception to completion phases.

Under the General Manager of Fincha'a Sugar Factory (FSF), there are three Deputy General Managers responsible for Agricultural Operations, Factory Operations and Project Follow up & Contract Administration whom the expansion project concerned directly. Under the two operations, there are eight teams led by their respective Team Leaders under which the project was undertaken. Under Project Follow up & Contract Administration (which works as a counterpart with the consultant firm), there are 2 Senior Project Experts representing the two Operations. To determine the appropriate sample size, sample respondents were selected and surveyed proportionately and randomly from each section. The teams assigned a range of two to four supervisors to follow up the monitoring and evaluation of the project. 3 supervisors were randomly selected from the range of 2 to 4 assigned for M&E from the 8 Teams leading to an average of 24 Supervisors. Including the General Manager, a total of 38 staff members were of interest in the target population.

Under Operations & Projects Deputy CEO of Ethiopian Sugar Corporation (ESC), there are three executive officers responsible for Factory Operation Division, Agricultural Operation

Division, and Project Administration Division. Under each Division, there are 2 supervisors. Hence, 9 staff members were of interest from ESC to include in the target population.

Altogether, 47 staff members were of interest to the researcher in the target population for the research at hand. Table 3 Summarizes the distribution of respondents.

***Table 3**: Distribution of Respondents*

Category of respondents	*Ethiopian Sugar Corporation,* ***Operations & Projects***						***Sample, Sub-Total***
	Fincha'a Sugar Factory (FSF)						
	Agricultural Operations	Factory Operations	Project Follow up & Contract Admin. Division	Agricultural Operations Division	Factory Operations Division	Project Administration Division	
Top Management	1	1	1				**4[a]**
Executive officers				1	1	1	**3**
Team Leaders	4	4					**8**
supervisors	12	12	2	2	2	2	**32**
						Sample, Total	**47**

[a] The General Manager of FSF is a member of the Top Management

3.3. Types and Source of Data

In order to address the research questions, this study used both primary and secondary data, which were collected by structured respondent survey questionnaires from the above main organizations and sample respondent.

The Secondary data was gathered from government reports on the success and failure of the GTPs, assessment/evaluation reports of funding organizations, case studies conducted by construction and commissioning organizations, unpublished master's theses and doctoral dissertations, publications (books, newspapers, journals, etc.) and websites of the ESC and FDRE government offices (Central Statistics Agency, Development and Planning Commission, Economic and Finance Ministry).

3.4. Methods of Data Collection

Primary and secondary data sources were used in accordance with the research problem and objectives. In research work, multiple data collection strategies outperform single data collection strategies. From the researcher's perspective, the data collection methods chosen are a questionnaire, and secondary sources.

A two-part questionnaire with open- and closed-ended questions was created. To collect primary data on sample respondents, a questionnaire with open- and closed-ended questions was developed in two main parts. Part one was prepared to collect general information about

the respondent's gender, age, education, responsibility, years of experience, and knowledge of project monitoring and evaluation practices. The second part was prepared to get the specifics of the challenges of monitoring and evaluation practices while implementing the expansion project. The researcher used both electronic and printed questionnaires to be sent via email and in-person to collect information from project team representatives.

For the predetermined response questionnaire, a five-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5) was used. Because, a five-point Likert scale is a popular rating scale that asks respondents to indicate their level of agreement or disagreement with a series of statements or questions (Albaum, 1997).

In addition to data collection through questionnaires, secondary data was used to investigate theoretical issues related to monitoring and evaluation practices and their challenges. Books, journal articles, other research projects, and trustworthy web portals were evaluated. The research relies heavily on primary data gathered from direct participants in monitoring and evaluation processes. Reviewing secondary literature allows for a better understanding of the research topic in general, as well as the study problem at hand; in particular, it serves as a useful reference for making comparisons to primary research later in the research report.

3.5. Methods of Data Analysis

The collected data was coded and logged in the computer using statistical package for social science (SPSS V26) and analyzed using quantitative data analysis methods. Quantitative method involved descriptive and inferential statistical analysis. Descriptive statistics such as frequencies, percentages, mean, standard deviations used to summarize collected data. And inferential statistical methods such as: correlation and regression. Pearson correlation test was used to establish the relationship between variables. Regression analysis is a statistical model used that was employed in this study establish relationship between challenges of M&E and project success. The reason as to why the regression model was used is because it is effective in determining the effect of the dependent variable over changes in the independent variable. The study used following regression model:

$$\boldsymbol{Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + e}$$

Where: Y = project success

X_1 = Institutionalizing M&E System

X_2 = Linking M&E to objectives

X_3 = Planning for M&E

X_4 = Data management

X_5 = Stakeholders Engagement in M&E

$\boldsymbol{\beta}$ = Beta coefficients, $\boldsymbol{e}$ = Error term

The study investigated the effects of Institutionalizing M&E System, Linking M&E to objectives, Planning for M&E, Planning for M&E, Data management and Stakeholders' Engagement in M&E on project success. It obtained reliable measures of each variable, entered predictor variable and outcome variable into the standard regression model. The X_1, X_2, X_3, X_4 and X_5 were used to inform the study on non-zero linear relationship with Y.

3.6. Reliability and Validity Analysis

The researcher attempted to design the instruments using reliable sources such as published books, articles, and previous research in the field to ensure the validity and reliability of the data used in this study. Furthermore, the researcher received feedback on the questionnaire from the research advisor in order to reduce instrument errors.

3.7. Ethical Considerations

This study took into account the ethical issues that must be considered in scientific research. The study results are based on data provided by respondents, document review, and the process is realistic and free of bias. Furthermore, the researcher obtained the consent of the interviewees and promised to keep the information gathered for this study confidential.

Chapter Four

4. Data Analysis, Presentation and Discussion

This chapter presents the findings of the research on the Effects of Monitoring and Evaluation on Project Success in Ethiopian Sugar Development Projects: The Case of Fincha'a Sugar Expansion Project. The collected data is analyzed using descriptive statistics, and interpretations of the results are provided.

4.1. Socio-Demographic Variables

The socio-demographic variable is the general information about respondents shown in the first part of the questionnaire that consists of age, educational level, experience in projects, and responsibility in the respondent's organization and the relevant response. A total of 47 questionnaires were distributed, with 40 of them returned. One questionnaire was found to be incomplete and was thus excluded. The remaining 39 questionnaires were analyzed, with an 83 percent response rate. This information helps to determine the suitability of the sample for the research under study as presented in Table 4.

***Table 4**: Socio-Demographic Data About Respondents*

Variables	Description	Frequency	Percent
Age	≤ 30	1	2.6
	31 ≤ 40	11	28.2
	≥ 41	27	69.2
	Total	**39**	**100.0**
Level of Education	Diploma/Advanced	1	2.6
	Degree	15	38.5
	Master's	22	56.4
	PhD Candidate	1	2.6
	Total	**39**	**100.0**
Work Position	Executive Managers (CEO/ DCEO & GM/DGM)	3	7.7
	Managers (Team Leaders & Executive officers)	14	35.9
	Supervisors (Engineers, Coordinators, experts & Chemists, Agronomists)	22	56.4
	Total	**39**	**100.0**
Experience in projects	1 to 5 years	10	25.6
	6 to 10 years	10	25.6
	Greater than 10 years	19	48.8
	Total	**39**	**100.0**

Source: Researcher's survey data, 2022

The result shows that, most of the respondents fell in the range above 40 (69.2%) indicating that they are mature enough to understand the project's routine activities.

Almost all respondents are highly educated with varying qualifications to respond relevant and quality data for the research (56.4% had the master's degree followed by 38.5% with first degree).

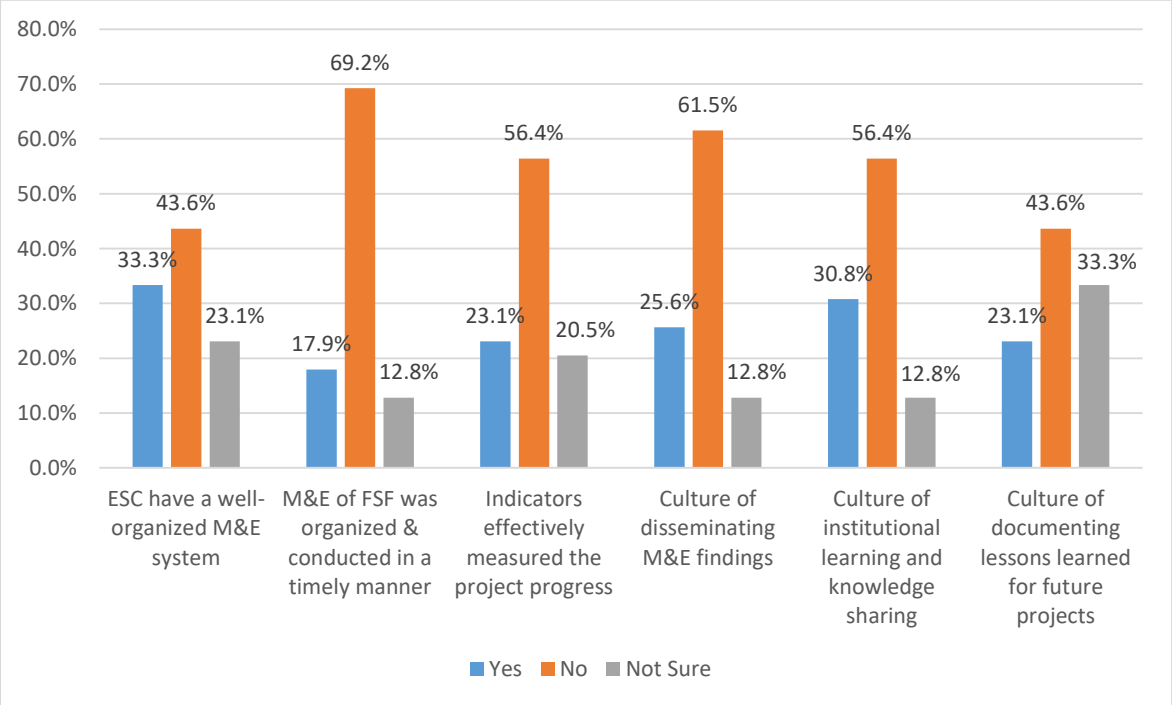
The majority of the respondents were experienced well in project management positions at different stages of the project phases which justify their level of understanding about how the projects are monitored and evaluated. 56.4% of the respondents were engaged in supervision of project operations, 35.9% in management positions with three fourth of them more than 5 years' work experience in projects.

4.2. Monitoring and Evaluation Practices

In this section, the research sought to diagnose the existing monitoring and evaluation practices in place for implementation of the project under study.

In Figure 4. the respondents were asked if the Fincha'a Sugar expansion project had a decentralized well-organized monitoring and evaluation system from Ethiopian Sugar Corporation suitable to measure project progress in a timely manner, the culture of utilizing monitoring and evaluation findings for decision making responses, they rated in a way presented below.

***Figure 4**: M&E Practices*



Source: Researcher's analysis, 2022

As we can see from the table, majority of the respondents (43.6 %) indicated that the ESC is not having well-organized M&E system for its sugar development projects followed by those (33.3%) confirmed the existence of well-organized M&E system and the rest (23.1%) were either unaware or unsure of whether it had well-organized system.

As far as Figure 4 is concerned, most of the respondents (69.2%) acknowledged that M&E system in Fincha'a Sugar Expansion project was not organized and conducted in a timely manner while 17.9% of the respondents disagree and 12.8% of them were unaware or unsure about that.

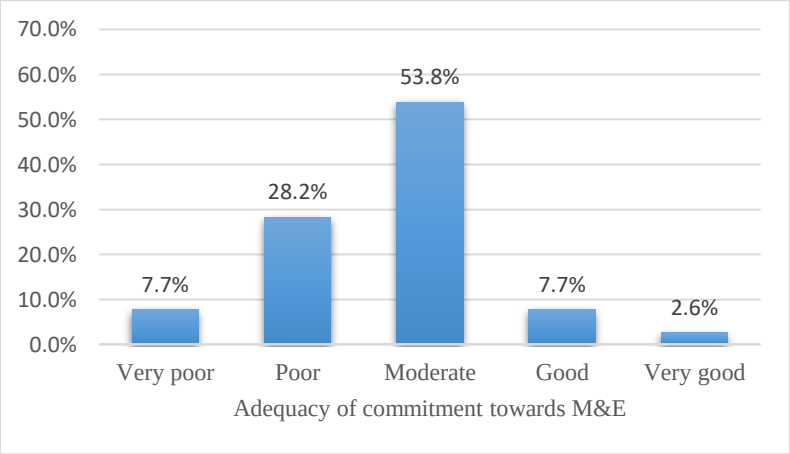
As per the response of most respondents (56.4%), indicators could not effectively measure the expansion project's progress while 23.1% of them agreed that indicators effectively measured the progress, and the remaining 20.5% stated that they were unsure of it.

In response to the questions of whether there was a culture (practice) of utilizing the M&E system:

- 61.5% of respondents said there was no culture of disseminating M&E findings, while 12.8% were unsure. However, the remaining 25.6% stated that there was a culture of disseminating the findings.
- There was no culture of institutional learning and knowledge sharing, according to 56.4% of respondents, and 12.8% were unaware. The remaining 30.8% said there was a culture of institutional learning and knowledge sharing.
- 43.6% of respondents said there was no culture of documenting lessons learned for use in future projects, while 33.3% were unsure. The remaining 23.1% stated that there was a culture of documenting.

As per Figure 5, 53.8% of the respondents rated the adequacy of top management commitment towards M&E as moderate while 35.9% of them were on the side of poor commitment and the rest (10.3%) in favor of good commitment.

***Figure 5**: Top Management Commitment*



Source: Researcher's analysis, 2020

As can be seen from existing monitoring and evaluation systems and practices, the M&E system of the ESC was not decentralized and tailored in a way for use in its sugar development projects. Furthermore, the M&E systems of both the ESC and FSF were found not well-organized. The indicators lacked effectiveness to measure the progress of the expansion project to produce useful information. The reason could be absence of clear key indicators. This finding justifies the setback of Ethiopia's monitoring and evaluation system which is based on the sectoral approach (at strategic level) (FDRE, 2010) that limit the ability of monitoring and evaluation practices to provide critical assessments for decision-making, accountability, and learning purposes (Gudda, 2011).

The analysis also confirmed that there were poor cultures of disseminating M&E findings, institutional learning and knowledge sharing, or documenting lessons learned for use in future projects existed. The reason for this could be the moderate commitment of top management towards M&E.

4.3. Challenges of Monitoring and Evaluation that Influenced Project Success

The aim of this section is to identify challenges of monitoring and evaluation that were barriers to the success of Fincha'a Sugar expansion project.

A suggested list of five broad challenges was forwarded for rating based on the literature review.

4.3.1. Institutionalizing M&E System

The objective is to see that institutionalization and coordination of monitoring, evaluation, accountability, and learning systems, including defining and clarifying roles and responsibilities, aligning and coordinating among hierarchical offices, and building internal staff capacity were barriers to effective M&E.

The first question asked if the monitoring and evaluation of Fincha'a Sugar Expansion project was undertaken by a centralized M&E team under ESC that has also responsibilities to monitor other sugar development projects or an M&E team dedicated to and based at project site. According to Table 5, the result revealed that 56.4% of the respondents confirmed that a centralized M&E team from ESC was undertaking M&E of the project while 43.6% of them stated that an M&E team dedicated to and based at project site was undertaking the M&E.

***Table 5**: M&E Office*

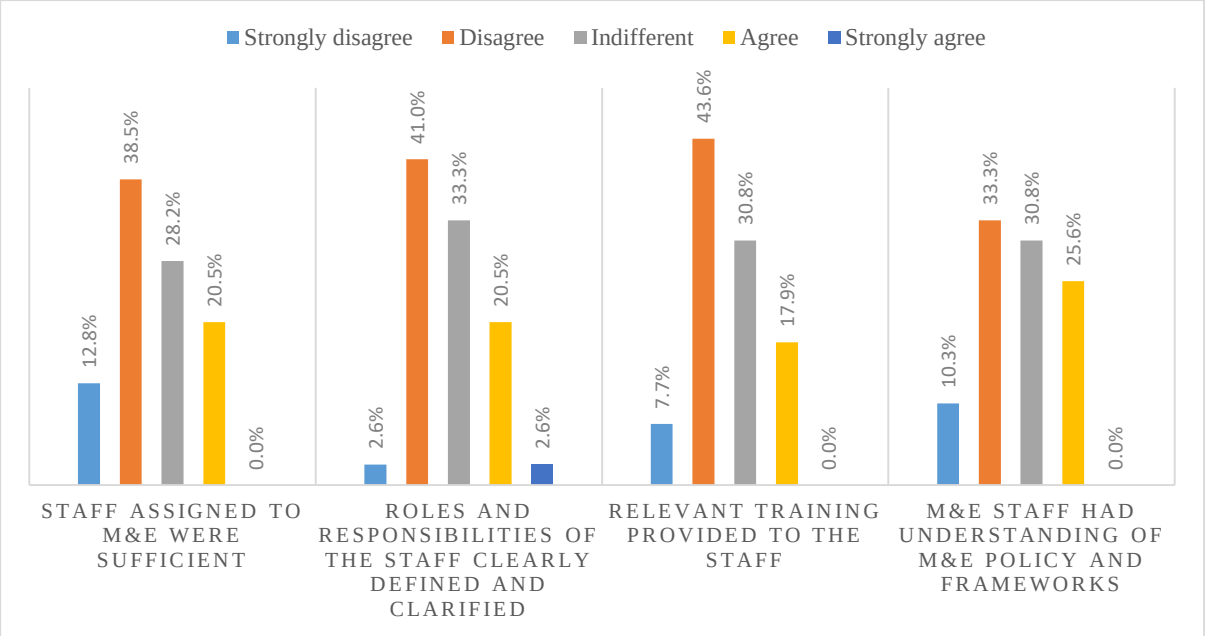
Statement		Freq.	Percent
The monitoring and evaluation of Fincha'a Sugar Expansion project was undertaken	By a centralized M&E team that has also responsibilities to monitor other sugar development projects under ESC	22	56.4
	By an M&E team dedicated to and based in Fincha'a Sugar Expansion project	17	43.6
	Total	39	100.0

Source: Researcher's analysis, 2022

However, from the organizational structure, it was noted that having communicating, aligning and coordinating M&E among hierarchical project offices at ESC and FSF are the things which were done jointly by both parties.

Manning, defining and clarifying roles and responsibilities, and building internal staff capacity to help them understand M&E policies and frameworks are another important aspect of institutionalizing M&E system. To that end, four statements were developed to analyze the extent to which those were challenging M&E practices (Figure 6). In this regard, the majority of respondents, 51.3% (12.8% strongly disagree + 38.5% disagree) believed that staff assigned for M&E were not sufficient while 20.5% believed the staff were sufficient for M&E. The rest (28.2%) were neutral.

***Figure 6**: Institutionalizing M&E System*



Source: Researcher's analysis, 2022

Similar interpretation can be made from the table for the rest three statements.

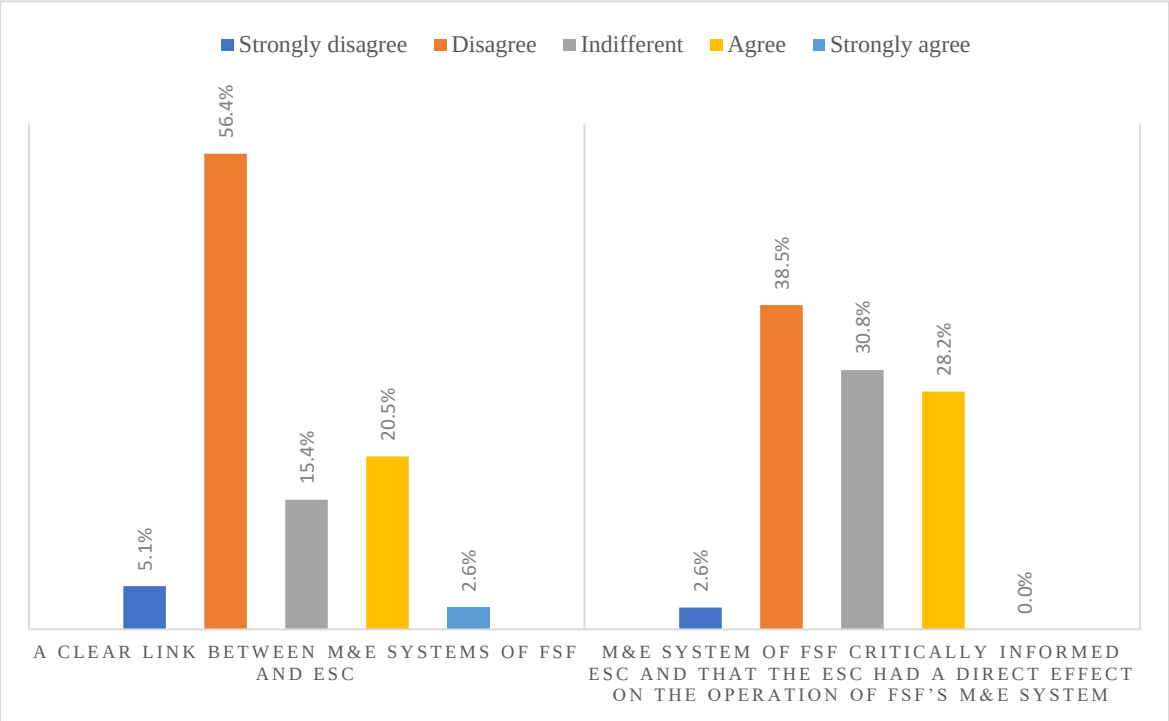
This finding is in line with the findings of the WFP that there are challenges in institutionalizing and coordinating M&E including defining and clarifying roles and

responsibilities, aligning and coordinating among sectors and actors, and building internal staff capacity (WFP, 2020).

4.3.2. Linking Monitoring and Evaluation to Objectives

Here, the research sought to see barriers to the project arising from lack of a clear link between M&E system and objectives (strategy and operation) to implement project activities efficiently and effectively. The lack of clear objectives and the absence of clear key indicators limit the ability of M&E practices to provide critical assessments for decision-making, accountability, and learning purposes (Gudda, 2011).

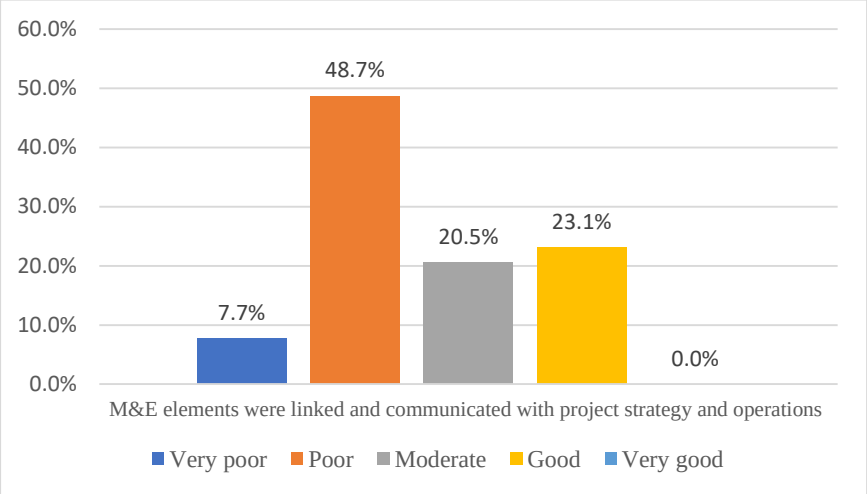
***Figure 7**: Linking M&E systems*



Source: Researcher's analysis, 2022

According to the analysis in Figure 7, 61.5% (5.1% strongly disagree + 56.4% disagree) and 51.1% (2.6% strongly disagree + 38.5% disagree) of the respondents respectively believed that there wasn't a clear link between M&E systems of Fincha'a Sugar project and ESC, and hence M&E system of Fincha'a Sugar project didn't critically inform ESC and that the ESC didn't have a direct effect on the operation of Fincha'a Sugar.

***Figure 8**: Linking M&E Objectives*



Source: Researcher's analysis, 2022

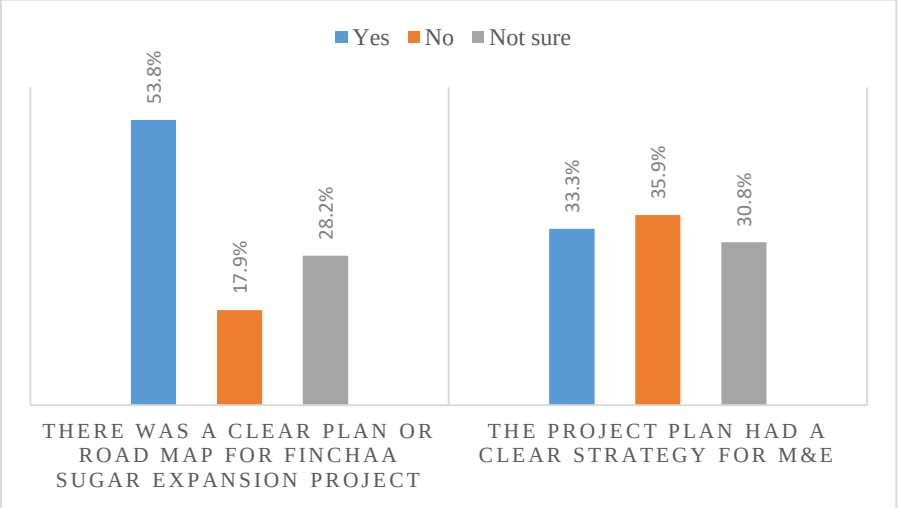
Likewise, 56.4% (7.7% strongly disagree + 48.7% disagree) of the respondents rated that the M&E elements were not linked and communicated with project strategy and operations to implement activities efficiently and effectively, 20.5% rated the link to be moderate and 23.1% of the respondents rated the link to be good (Figure 8). This finding doesn't recognize the theory stated by Guijt and Woodhill (2002) that well linked M&E system with project strategy and operations allows M&E findings to have steering function.

4.3.3. Planning for Monitoring and Evaluation

M&E is heavily dependent on proper planning. When plans are properly developed at the beginning of a project, M&E becomes much easier exercise to plan and implement. Conversely, it can be difficult to monitor and evaluate a project that was not properly planned to begin with. In this part, the study attempts to identify if the project confronted challenges of M&E practices arising from lack of resource allocation & mobilization, budgeting, workplans, tailored M&E policy and frameworks.

From Figure 9, majority of the respondents (53.8%) confirmed that there was a clear plan or road map for Fincha'a Sugar expansion project and few respondents (17.9%) disagreed that there was a clear plan for the project while the rest were unaware of it. In the same manner, one third of the respondents stated that the project plan had a clear strategy for M&E while almost similar number of respondents (35.9%) contradicting that the project had a clear strategy and the rest were unsure about it.

***Figure 9**: Project Plan*



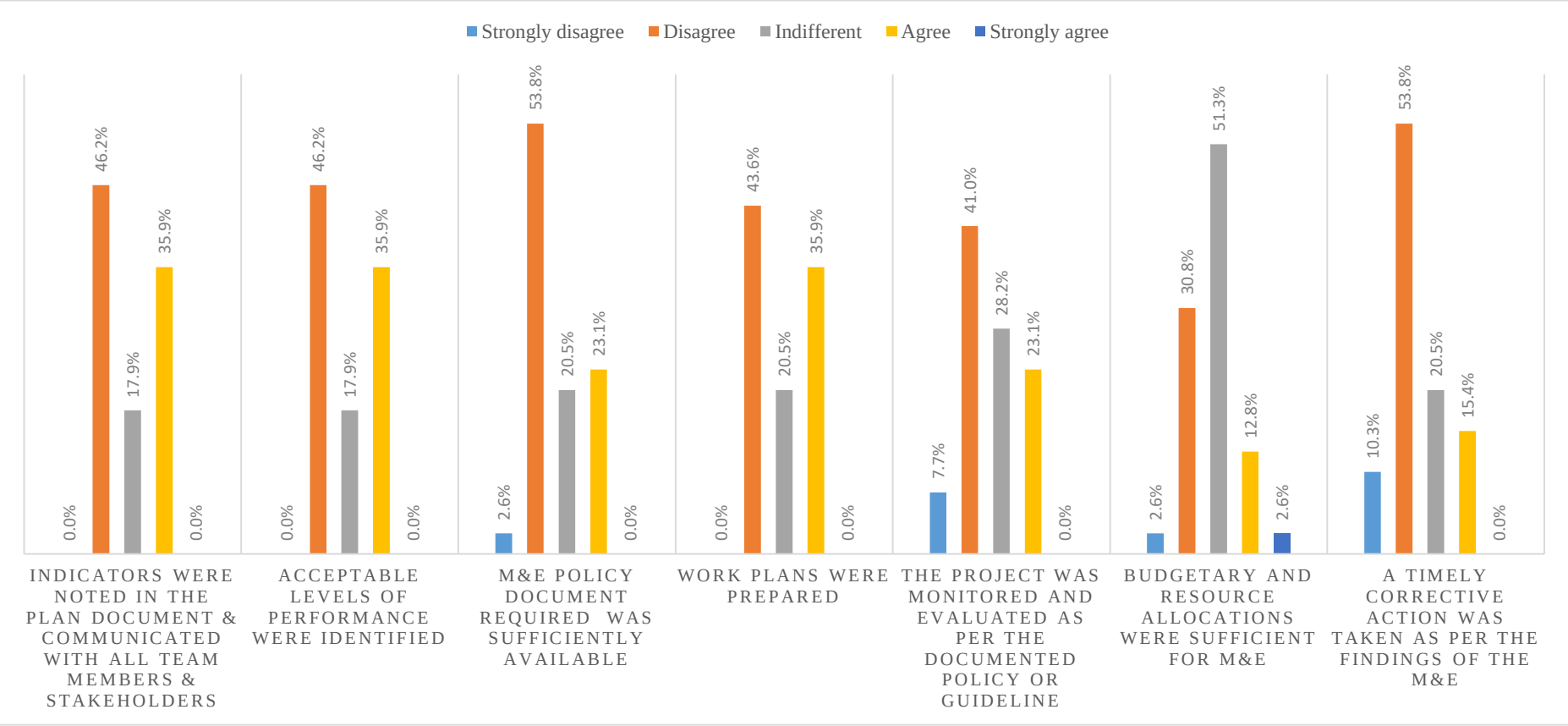
Source: Researcher's analysis, 2022

From Figure 10, 46.2% of the respondents believed that Indicators that measure project progress were not noted in the planning document and communicated with all team members and stakeholders while 17.9% of them were neutral. Whereas, 35.9% of the respondents believed that indicators were noted in the planning document and communicated with all team members and stakeholders. The same interpretation can be applied for identifying acceptable levels of performance.

A functional M&E system strives to attain procedures, which ensure effectiveness, transparency and accountability in to the project management practices at various stages of project cycle. M&E policy document comprises of these procedures: guidelines, processes, templates and tools. In this regard, 56.4% of respondents disagreed that the policy document required for proper project M&E was not sufficiently available and for this reason, the project was not monitored and evaluated as per the documented policy or guideline (48.7% of the respondents). Whereas, 23.1% the respondents agreed with availability of the document for the project to be monitored as per the documented policy or guideline. From the respondents, 43.6 % disagreed that workplans were prepared ahead whereas 35.9% agreed that they were prepared ahead. The rest were unsure about that.

On the other hand, 51.3% of the respondents replied unaware of the sufficiency of budgetary and resource allocations for monitoring and evaluation while 30.8% of them indicated that they were insufficient. From the responses, 64.1% of the respondents (53.8% disagree, 10.3% strongly disagree) also indicated that a timely corrective action was not taken as per the findings of the M&E while 15.4% of them sided to the timely action as per the findings.

***Figure 10**: Planning M&E*



Source: Researcher's analysis, 2022

Regarding the Monitoring and Evaluation frameworks that Fincha'a Sugar Expansion project used (Table 6), there were different suggestions among respondents. There was a mixed feeling among respondents that some respondents confirmed there was one type framework while some stated that the project used a combination of two or three, and still others said that the type of framework applied was based on situation.

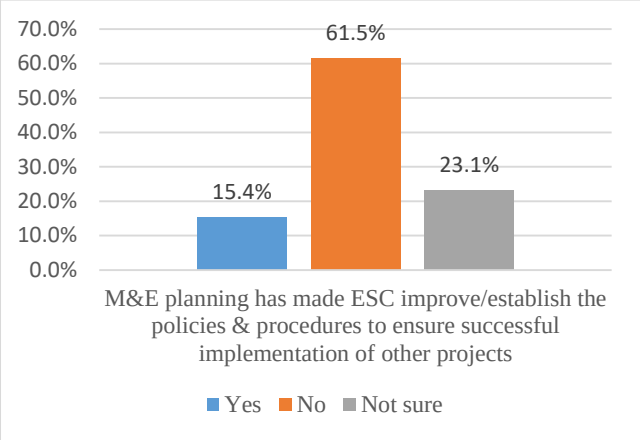
***Table 6**: M&E Frameworks used for the project*

Monitoring and Evaluation frameworks	Frequency	Percent
Performance indicators	13	33.3
Results-based Framework	2	5.1
Formal Survey	4	10.3
Rapid Appraisal Method	1	2.6
Based on the situation, one or more could be applicable	3	7.7
Performance indicators Results-based Framework	4	10.3
Performance indicators Formal Survey	4	10.3
Performance indicators Rapid Appraisal Method	2	5.1
Results-based Framework Formal Survey	1	2.6
Performance indicators Logical Framework Approach Formal Survey	1	2.6
Performance indicators Results-based Framework Formal Survey	4	10.3
Total	39	100.0

Source: Researcher's analysis, 2022

The other challenge that the respondents indicated was that M&E planning hasn't made the ESC improve/establish the policies and procedures to ensure successful implementation of other sugar development projects. From Figure 11, it can be seen that 61.5% of the respondents indicated that there has been no improvement of policies and procedures from M&E planning while only 15.4% of them indicated there has been improvement.

***Figure 11**: M&E planning for policy improvement*



Source: Researcher's analysis, 2022

Ayalew, et.al, (2016) also confirmed the fact that the level of construction project management practice in terms of adapting general project management procedures, project management functions, tools, and techniques are unsatisfactory.

4.3.4. Data Management of Monitoring and Evaluation

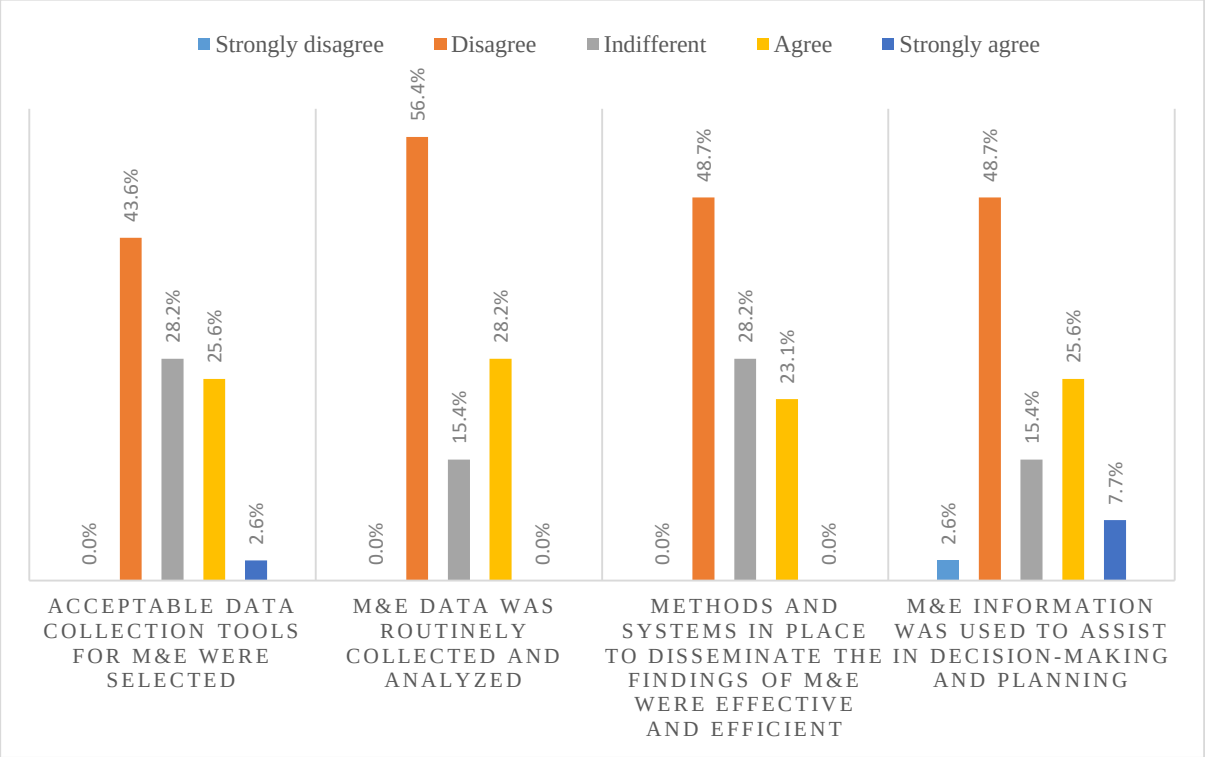
M&E data management is concerned with how M&E data is collected, analyzed, and reported in order to guide post-M&E project decisions.

In this part of the research, the research seeks to identify timeliness and routines of data collection, methods and systems in place for disseminating M&E findings and finally, how M&E information was used in decision-making and planning.

From Figure 12, majority of the respondents showed their disagreements to justify that the firm's data collection was timely and routine. The methos and systems in place for disseminating M&E findings and utilizing the M&E information in decision-making response and planning were also poor.

- The respondents did not agree that adequate data collection tools for M&E were selected before starting project implementation, as verified by 43.6 % disagree and 28.2 % neutral, while 25.6 % agree and 2.6 % strongly agree.
- There was not routinely collecting and analyzing Monitoring and Evaluation data to assess project performance with 56.4% disagree and 15.4% neutral.
- The respondents showed disagreement that the methods and procedures in place to distribute the findings of Monitoring and Evaluation were effective and efficient, and Monitoring and Evaluation information was used to aid in decision-making and planning, as demonstrated by 48.7% and 51.3% respectively.

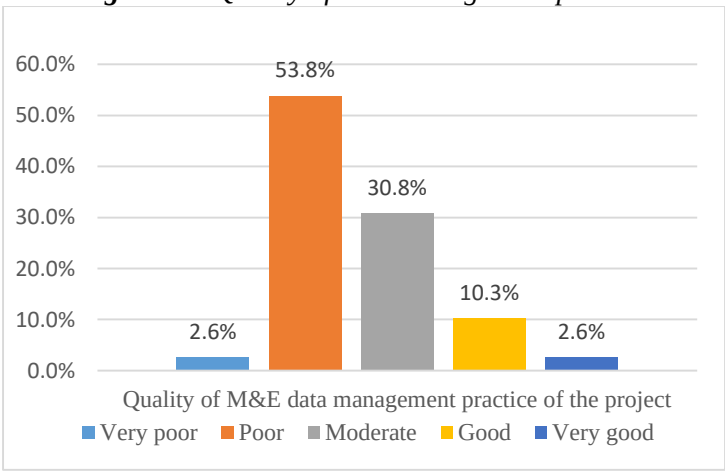
***Figure 12**: M&E data management*



Source: Researcher's analysis, 2022

Generally, Figure 13 tells that 56.4% (2.6% very poor + 53.4% poor) of the respondents rated the quality of data management practice of the project poor and 30.8% of them rated it to be moderate while few of them rating good.

***Figure 13**: Quality of data management practice*



Source: Researcher's analysis, 2022

In the port of these findings, WFP (2020) acknowledged that data collection challenges including inadequate staffing, high staff turnover, infrequent and sometimes poor training in data collection and analysis skills, duplication of efforts, delays in data

collection and reporting, and limited data verification and validation are parts of the changes of the strategic plan.

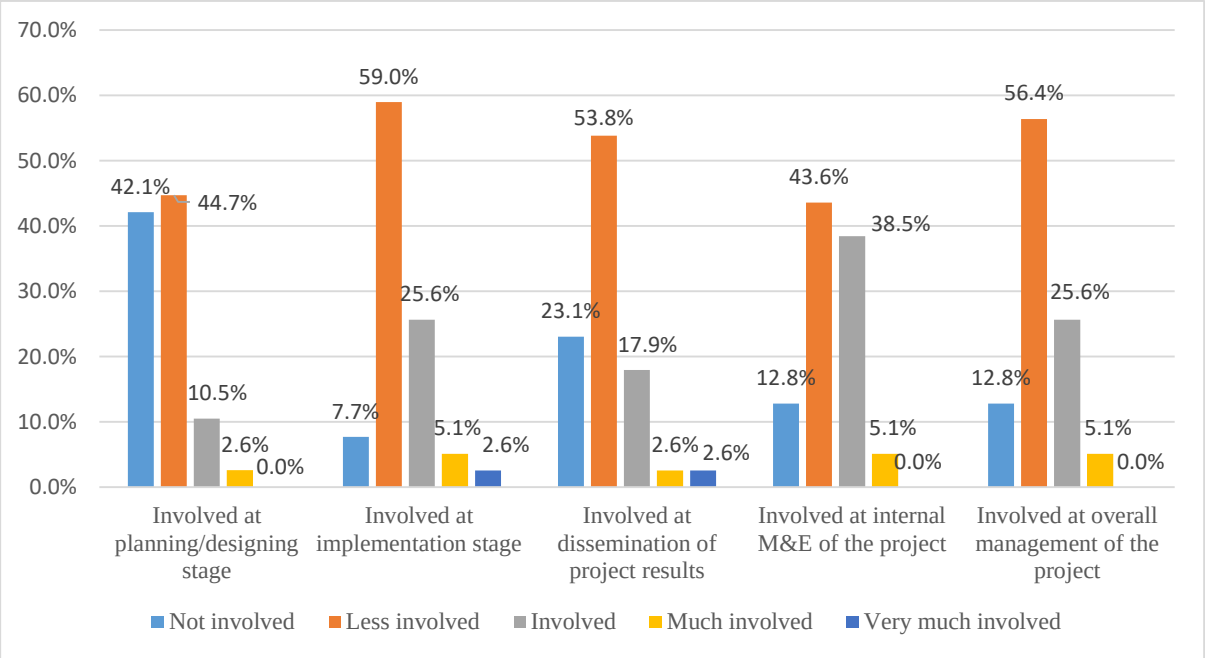
4.3.5. Stakeholders' Engagement in Monitoring and Evaluation

The involvement of project staff and key stakeholders ensures the M&E system's feasibility, understanding, and ownership (Bakewell et.al, 2003).

Therefore, this part tries to see how those key stakeholders were identified, analyzed and communicated while undertaking M&E of the project.

The majority of respondents stated that stakeholders' involvement in different project stages was very low, as evidenced by analysis in Figure 14.

***Figure 14**: Respondents' involvement in project phases*

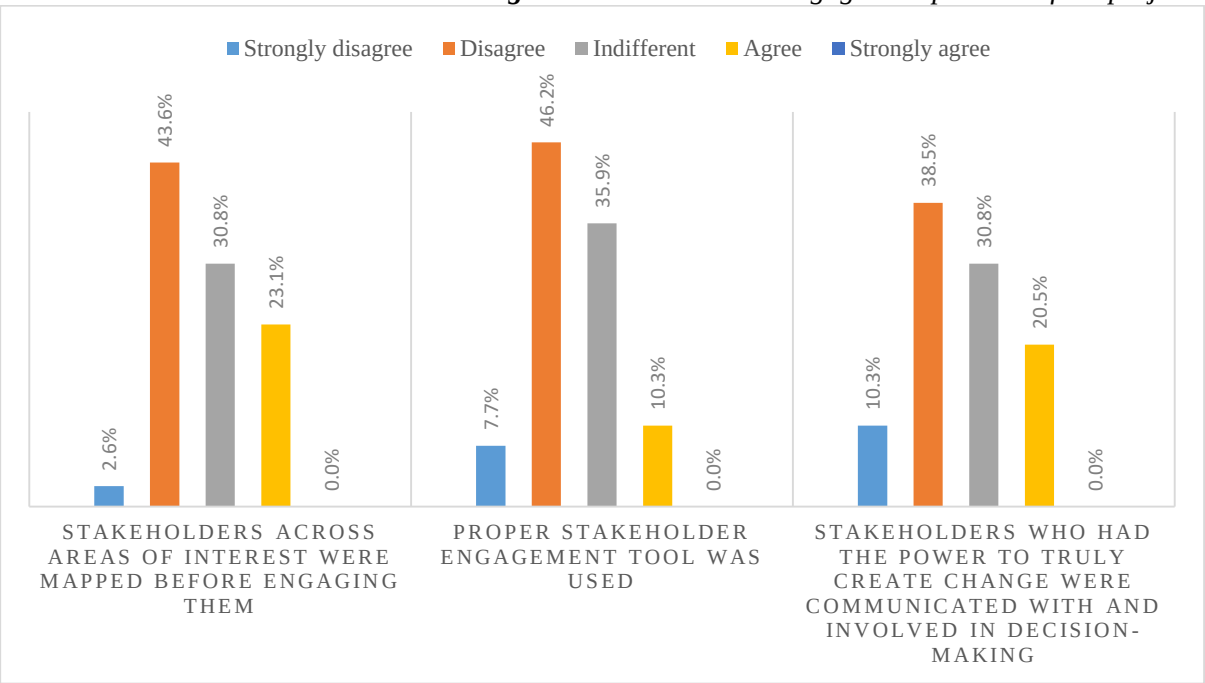


Source: Researcher's analysis, 2022

When questioned about stakeholders' engagement in monitoring and evaluation based on the five-scale Likert (Figure 15), the study discovered that the majority of respondents did not agree with all of the statements concerning stakeholders' participation in monitoring and assessment. They disagreed the fact that stakeholders across areas of interest were mapped before engaging them in project monitoring and evaluation; around 46.2% strongly disagreed and disagreed, 30.8% were indifferent, and 23.1 % agreed. Second, the respondent stated that no effective stakeholder engagement tool was used to identify stakeholders, define their responsibilities, determine the optimal stakeholder group, design an engagement plan, and track stakeholder engagement (46.2 % disagree and 7.7 % strongly disagree, whereas 10.3 % agreed). The respondent did not think that, based on evaluation results, stakeholders

with the ability to truly create change were communicated with and included in decision-making (38.5% disagree and 10.3% strongly disagree, whereas 20.5% agreed).

***Figure 15**: Stakeholders' engagement practice of the project*



Source: Researcher's analysis, 2022

Abdi & Kimutai (2018) found that involvement of stakeholders can enhance project performance as well as creating a sense of project ownership and their absence can lead to sustainability challenges.

Further to the above suggested challenges, the respondents were requested to add challenges they faced and the same are listed as follows:

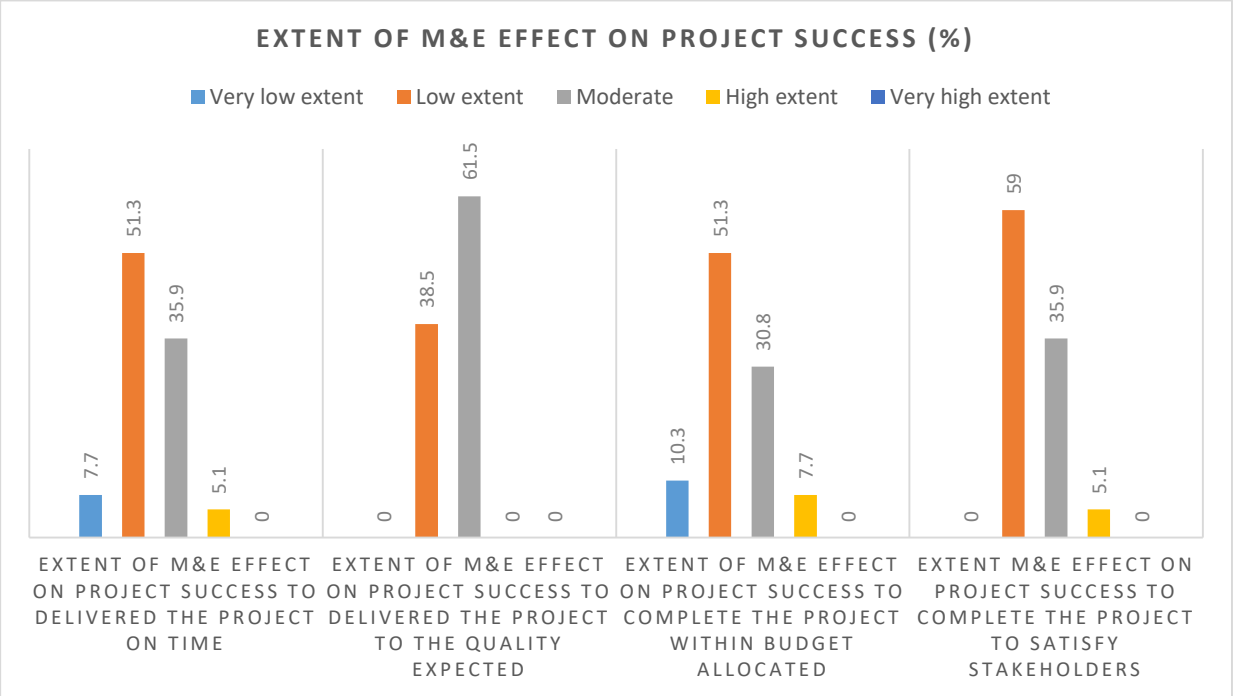
- Social cost & unwell organized manpower
- False performance data reporting
- Communication gap between stakeholders and concerned
- The expansion project packages were not well organized and designed with respect to M&E indicators, system, manning, resources, etc., by a known international consultant in Sugar development projects. The consultant of FSF expansion was awarded without tendering/bidding who won by least cost offer for consulting Tendaho Sugar Development Project.
- Corruption which contributed to project delay and complex decision-making response for M&E

- Potential interference of top government officials from ESC, who had poor knowledge about project management but high political power, contributing to less power in decision-making response of M&E by project site office.

4.4. Effects of Monitoring and Evaluation on Project Success

The aim of this part is to establish the extent to which M&E affected project success of Fincha'a Sugar Expansion project. To see this, the respondents were requested to indicate their levels of agreement on several parameters of project success.

***Figure 16**: Extent of M&E Effect on Project Success*



Source: Researcher's analysis, 2022

From Figure 16, most of the respondents believed that the extent of M&E effect on project success in terms delivering the project on time low (51.3%) while delivering it the quality expected was moderate (61.5%). Likewise, they believed that the extent of M&E effect on project success in terms of completing the project within budget allocated and to stakeholders' satisfaction were both low (51.3% and 59% respectively).

Further, the study carried out inferential statistics to examine the model as conceptualized in chapter two. Correlation analysis was used to show the strength of the relationship between dependent and independent variables while regression analysis was used to show the nature of the relationship between dependent and independent variable. In addition, correlation analysis was used as a multicollinearity test whereby if two independent variables had correlation coefficient of +/– 0.7, then multicollinearity was a problem.

4.4.1. Descriptive Data Analysis

***Table 7**: Descriptive Statistics*

	Mean	Std. Deviation
Project Success	2.5577	.49823
Institutionalizing M&E system	2.6667	.68904
Linking M&E to Objectives	2.6752	.76276
Planning for M&E	2.7509	.71181
Data Management of M&E	2.7538	.75737
Stakeholders' Engagement in M&E	2.6154	.77058

Source: Researcher's analysis, 2022

a) Correlation Coefficient

Pearson correlation coefficient was used in this study to determine the magnitude and the direction of the relationships between the dependent variable and independent variables as both the independent and the dependent variables follow normal distribution.

The correlation strengths were interpreted using Cohen and Cleveland (2013) decision rules where 0.1 to 0.3 indicated weak correlation, 0.31 to 0.5 indicated moderate correlation strength and greater than 0.5 indicated a strong correlation between the variables.

***Table 8**:Pearson's Correlation of Variables*

	1	2	3	4	5	6
Project Success	1					
Institutionalizing M&E System	.565**	1				
	0.000					
Linking M&E to Objectives	.858**	.552**	1			
	0.000	0.000				
Planning for M&E	.736**	.644**	.835**	1		
	0.000	0.000	0.000			
Data Management of M&E	.760**	.552**	.730**	.728**	1	
	0.000	0.000	0.000	0.000		
Stakeholders' Engagement in M&E	.648**	.450**	.633**	.723**	.519**	1
	0.000	0.004	0.000	0.000	0.001	

**. Correlation is significant at the 0.01 level (2-tailed).

Key: 1 - Project Success, ***2*** - Institutionalizing M&E System, ***3*** - Linking M&E to Objectives, ***4*** - Planning for M&E, ***5*** - Data Management of M&E, ***6*** - Stakeholders' Engagement in M&E

Source: Researcher's analysis, 2022

Results in Table 8 revealed that there was a positive and significant relationship between institutionalizing M&E system and project success (r=0.565, p value=0.000). This implies that a unit increase in the institutionalizing M&E system increases project success by 56.5%. Secondly, there was a strongly positive and significant relationship

between Linking M&E to Objectives and project success (r =0.858, p value=0.000), between Planning for M&E and project success (r =0.736, p value=0.000), between Data Management of M&E and project success (r=0.760. p- value=0.000), and between Stakeholders' Engagement in M&E and project success (r=0.648, p value =0.000). This implies that a unit increase in Linking M&E to Objectives, in Planning for M&E, in Data Management of M&E, and in Stakeholders' Engagement increases project success by 85.8%, 73.6%, 76% and 64.8% respectively.

b) Multiple Regression

This measures the ability of independent variables to predict an outcome of a dependent variable where there is a linear relationship between them. For this study, regression analysis is used to establish whether independent variables predicted the dependent variable.

According to Hair et al. (2019), one possible effect of multicollinearity is the reversal of sign for an estimated regression coefficient from the expected direction represented in the bivariate correlation. The high positive correlation between the independent variables causes the sign for the regression coefficient for one of them to change from positive (in the bivariate correlation) to a negative sign. The other possible effect of multicollinearity is diagnosed while performing condition indices and decomposition of variance. The condition indices and decomposition of variance should not exceed the threshold of 30 and 0.90 respectively.

***Table 9**: Regression Coefficients[a] with all variables*

Model		Coefficients		t	Sig.	Correlations			Collinearity	
		B	Std. Error			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.794	.176	4.511	.000					
	Institutionalizing M&E System	.075	.074	1.018	.316	.565	.174	.079	.569	1.756
	Linking M&E to Objectives	.434	.097	4.460	.000	.858	.613	.345	.269	3.711
	Planning for M&E	**-.175**	.123	-1.428	.163	.736	-.241	-.110	.195	5.132
	Data Management of M&E	.192	.079	2.414	.021	.760	.387	.187	.410	2.439
	Stakeholders' Engagement in M&E	.136	.073	1.871	.070	.648	.310	.145	.473	2.114

a. Dependent Variable: Project Success

Source: Researcher's analysis, 2022

As in Table 9, the high positive correlation between linking M&E to objectives and planning for M&E (correlation = 0.835) causes the sign for the regression coefficient for planning for M&E to change from positive (in the bivariate correlation) to a negative sign.

***Table 10**: Collinearity Diagnostics[a] with all variables*

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	Institutionalizing M&E system	Linking M&E to objectives	Planning for M&E	Data management of M&E	Stakeholders' engagement in M&E
1	1	5.858	1.000	.00	.00	.00	.00	.00	.00
	2	.047	11.108	.51	.10	.05	.01	.01	.13
	3	.038	12.433	.14	.07	.03	.00	.18	.51
	4	.029	14.269	.30	.72	.03	.00	.15	.03
	5	.018	17.853	.05	.00	.44	.03	.66	.17
	6	.009	25.436	.00	.11	.45	**.95**	.01	.16

a. Dependent Variable: Project Success

As shown in Table 10, the value of decomposition of variance for the last condition index is **0.95** exceeding the threshold of 0.90.

Therefore, planning for M&E with negative regression coefficient and value of decomposition of variance .95 is removed from the regression analysis as these indicate presence of multicollinearity.

After excluding planning for M&E from regression analysis, the interpretation is as follows.

***Table 11**: Regression Model Summary[b]*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.889[a]	.791	.766	.24101	.791	32.099	4	34	.000

a. Predictors: (Constant), Institutionalizing M&E system, Linking M&E to objectives, Data management of M&E, Stakeholders' involvement in M&E

b. Dependent Variable: Project Success

Source: Researcher's analysis, 2022

The model summary (Table 11) shows the coefficient of determination which revealed the model explanatory power. The R-value of 0.889 shows that there is a strong and positive correlation among the four variables. And an R- square (R^2) value of 0.791 shows that about 79.1% change in project success can be jointly explained by

institutionalizing M&E system, Linking M&E to Objectives, Data Management of M&E and Stakeholders' Engagement in M&E. The remaining 20.9% of project success can be explained by other factors not included in the model.

***Table 12**: ANOVA[a] Model*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.458	4	1.864	32.099	.000[b]
	Residual	1.975	34	.058		
	Total	9.433	38			

a. Dependent Variable: Project Success

b. Predictors: (Constant), Stakeholders' involvement in M&E, Institutionalizing M&E system, Data management of M&E, Linking M&E to objectives

Source: Researcher's analysis, 2022

The F ratio of 32.099 and Sig. of 0.000 (significance level of less than 0.01) in ANOVA model (Table 12) indicates that the coefficient of determination (R) generated by Model Summary (Table 10) is fit for predicting project success of Fincha'a Sugar expansion using the five independent variables.

***Table 13**: Regression Coefficients[a]*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.785	.179		4.397	.000
	Institutionalizing M&E System	.041	.071	.057	.579	.567
	Linking M&E to Objectives	.362	.085	.555	4.279	.000
	Data Management of M&E	.165	.078	.251	2.108	.042
	Stakeholders' Engagement in M&E	.091	.066	.141	1.369	.180

a. Dependent Variable: Project Success

Source: Researcher's analysis, 2022

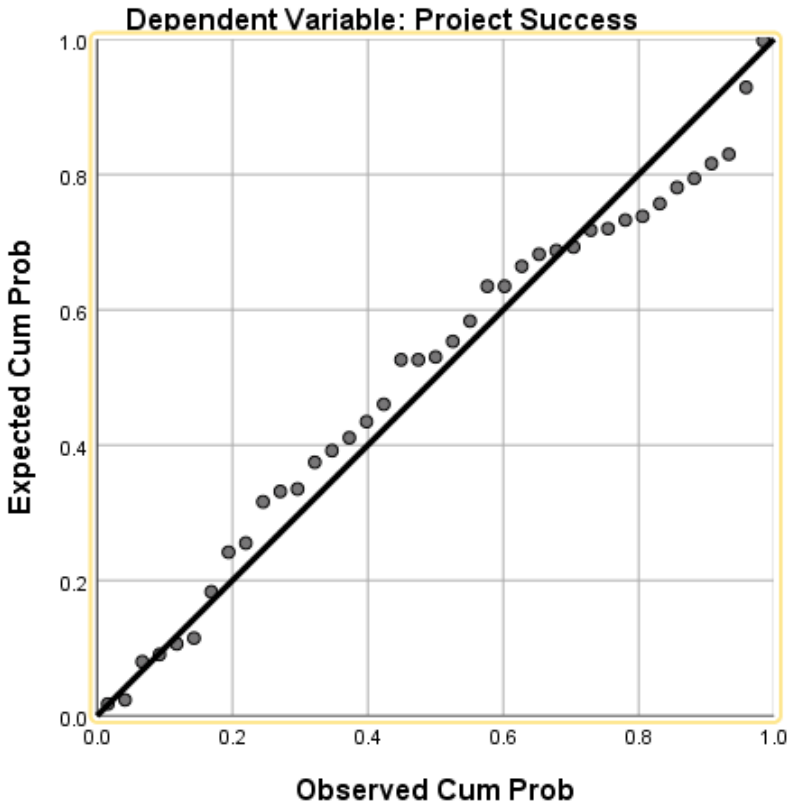
Out of the four independent variables shown in Table 13, Institutionalizing M&E System and Stakeholders' Engagement in M&E had a positive but insignificant effect on project success. Whereas, Linking M&E to Objectives and Data Management of M&E had positive and significant effect on project success.

- **Linking M&E to Objectives**: had a p-value of 0.000 which is less than 0.01 (1% level of significance), and was concluded that Linking M&E to Objectives had a positive and significant effect on project success. This implies a unit change in Linking M&E to Objectives increases project success by 0.362 units.
- **Data Management of M&E**: had a p-value of 0.042 which is less than 0.05 (5% level of significance) and was determined that Data Management of M&E had a

positive and significant effect on project success. This implies that a unit change in Data Management of M&E increases project success by 0.165 units.

Normality Test

***Figure 17**: Normal P-P Plot of Regression Standardized Residual*



Source: Researcher's analysis, 2022

Figure 17 contains the normal probability plots for the four variables found reflecting the shape of distribution.

Chapter Five

5. Conclusions and Recommendations

5.1. Summary of Findings

The objective of this descriptive research was to examine the effects of monitoring and evaluation on project success in Ethiopian Sugar Development projects for the case of Fincha'a Sugar Expansion project. The responses returned from the respondents and interviewees were analyzed and interpreted. The following summary of findings is drawn from the study based on the data presentation and analysis.

Regarding the general or existing monitoring and evaluation practices, it was observed that the M&E system of the ESC was not decentralized and tailored in a way for use in its sugar development projects. Furthermore, the M&E systems in both the ESC and FSF were not well-organized. The indicators measured the progress of the expansion project less effectively due to absence of clear key indicators. It was also confirmed that there were poor cultures of disseminating M&E findings, institutional learning and information sharing, documenting lessons learned for use in future projects existed. The respondents also indicated that top management's commitment to M&E was insufficient.

Concerning the challenges of monitoring and evaluation that affect projects success, the study identified four challenges that affect monitoring and evaluation and in turn had effect on project success: 1) Institutionalizing the M&E system: reflected by insufficient staff assigned for M&E, roles and responsibilities for M&E were not defined and clarified clearly, and relevant training was not provided to staff involved in M&E. 2) Linking M&E to Objectives: absence of a clear link between the M&E systems of FSF and ESC, and weak connection between M&E elements and project strategy and operation. 3) Data management for M&E: reflected by not using acceptable data collection tools, M&E data was not collected routinely, methods and systems for disseminating M&E findings were not available and that information was not used in decision making and planning. And finally, 4) Stakeholders' engagement in M&E: reflected by lack of prior mapping of stakeholders across areas of interest, proper stakeholder engagement tools were not used to identify and analyze, and stakeholders were not communicated and involved in decision making.

Concerning the effects of M&E on project success, the findings revealed that linking M&E to objectives (with $p = 0.000 < 0.01$) and data management of M&E (with $p = 0.042 < 0.05$) had a positive statistical significant effect on project success whereas institutionalizing M&E system (with $p = 0.567$) and stakeholders' engagement (with $p = 0.180$) were found insignificant. The p - values of 0.000 (less than 0.01) and 0.042 (less than 0.05) imply that

the model of M&E factors influencing project success was significant at the 99% and 95 % confidence levels respectively.

5.2. Conclusions

Generally, in response to the research problem and hence answering the research questions, the following conclusions were drawn.

Based on the findings of the study, the firm has a clear plan for sugar development projects with somewhat unclear project strategy. From the assessment of M&E practices of Fincha'a Sugar expansion project, it is revealed that there was a lack of well-organized and decentralized monitoring and evaluation system, and poor link between M&E system among hierarchical offices and inadequacy of top management commitment all leading to poor culture of disseminating M&E findings, institutional learning and documenting lessons learned for use in future projects.

Given this finding, the factors (main challenges) of M&E influencing project success were found to be institutionalizing M&E system, linking M&E system to objectives, data management of M&E and stakeholder's engagement in M&E.

Finally, the result revealed that linking M&E to objectives and data management of M&E had a positive statistical significant effect on project success whereas institutionalizing M&E system and stakeholders' engagement were found insignificant.

5.3. Recommendations

If results are not measured properly, one cannot tell success from failure, and if success cannot be seen, one cannot reward it, learn from it and correct it (Gudda, 2011).

The practices, challenges and effects of M&E on project success of Fincha'a Sugar expansion and other Sugar Development projects could be improved with the following practical recommendations which are made based on the research findings:

The M&E factors influencing project success of Fincha'a sugar expansion project have some challenges that, if not addressed, will have a serious impact on the success of future sugar development projects. ESC should, therefore, develop a well-organized and decentralized monitoring and evaluation system for use in its sugar development projects and strengthen culture of disseminating M&E findings, institutional learning and documenting lessons learned.

According to these findings, Sugar Development projects should focus on the four factors (challenges) that influence monitoring and evaluation as they have a positive impact on project success.

1. Institutionalizing the M&E system: filling sufficient staff to conduct M&E, defining their roles and responsibilities and providing relevant training
2. Linking the M&E to objectives: link between the M&E systems of project site and ESC there should be clear, connection between M&E elements and project strategy and operation should be strengthened.
3. Facilitate the use of Data Management system: acceptable data collection tools should be used, M&E data should be collected routinely, methods and systems for disseminating M&E findings should be efficient and M&E information should be utilized in decision making and planning.
4. Stakeholders' engagement in M&E: stakeholders across areas of interest should be mapped/planned ahead, proper stakeholder engagement tools should be used to identify & analyze stakeholders, and stakeholders should be communicated and involved in decision making.

Finally, no single policy can anticipate and provide detailed guidance for all construction projects, and hence ESC should rely on M&E findings and seek to improve/establish its M&E policy document for use in its sugar development projects across the country.

5.4. Suggestions for Further Research

The number of factors investigated in this study was limited. The study examined the effect of only five factors on the monitoring and evaluation that influence project success (Institutionalizing M&E System, Linking M&E to Objectives, Planning for M&E, Data Management of M&E, and Stakeholders' Engagement in M&E). Other factors that respondents suggested to be included and may have effects on project success include political influence, technology, and corruption. Future research should look into these factors in meeting the project success of sugar development projects.

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Appendix

The Effects of Monitoring and Evaluation Project Success in Ethiopian Sugar Development Projects: The Case of Fincha'a Sugar Expansion Project

Questionnaire

Dear Sir/Madam,

I am a graduate student of the School of Commerce at Addis Ababa University who is conducting research on 'The Effects of Monitoring and Evaluation on Project Success in Ethiopian Sugar Development Projects for the Case of Fincha'a Sugar Expansion Project' in partial fulfillment of Masters' degree in in Project Management.

I am kindly asking you to participate in this study by responding to all the items listed in the questionnaire enclosed with this cover letter to the best of your knowledge. You are taking part in this research voluntarily and thus can terminate it at any time.

The information you provide is confidential and will be used for academic purposes only.

The questionnaire consists of four parts:

Part I. Demographic data: Questions 1 to 4

Part II. Monitoring and Evaluation Practices: Questions 5 to 12

Part III. Challenges of Monitoring and Evaluation Practices: Question 13 to 26

Part IV. Effects of Monitoring and Evaluation on Project Success: Question 27

Your cooperation will be greatly appreciated.

With sincere respect,

Abayneh Lakew

Direction: Please provide the requested information on the space provided or by ticking the appropriate choice that describes your best answer.

Part I: Demographic Data

1. Your age: ☐ ≤ 30 years ☐ 31 – 40 years ☐ ≥ 40 years
2. Your level of education: ☐ Diploma /Advanced/ ☐ Degree ☐ Masters
   ☐ Other (Please specify): _____
3. Your position in the project/organization (please specify) _____:
4. Your experience in project related jobs in sugar development and other projects, if any: ☐ 1-5 years ☐ 6-10 years ☐ ≥11 years

Part II: Monitoring and Evaluation Practices

5. Do you think the Project Administration of Ethiopian Sugar Corporation is having a well-organized M&E system for its sugar development projects? ☐ Yes ☐ No ☐ Not sure
6. If 'Yes' for #5, do you also think that the monitoring and evaluation system at Project Administration was decentralized and tailored for use in sugar development projects, for our case in Fincha'a Sugar Expansion project? ☐ Yes ☐ No ☐ Not sure
7. Would you say that Monitoring and Evaluation in Fincha'a Sugar Expansion project was organized and conducted in a timely manner? ☐ Yes ☐ No ☐ Not sure
8. Could indicators effectively measure the project progress?
   ☐ Yes ☐ No ☐ Not sure
9. Was there a culture of disseminating Monitoring and Evaluation findings?
   ☐ Yes ☐ No ☐ Not sure
10. Was there a culture of institutional learning and knowledge sharing?
    ☐ Yes ☐ No ☐ Not sure
11. Was there a culture of documenting lessons learned for use in future projects?
    ☐ Yes ☐ No ☐ Not sure
12. How adequate was the commitment of top management towards Monitoring and Evaluation?

Very poor	Poor	Moderate	Good	Very good
☐	☐	☐	☐	☐

Part III: Challenges of Monitoring and Evaluation Practices

Under this part, five possible challenges (A to E) are identified to be assessed. Please provide appropriate information that describes your best answer as per the instruction.

A. Institutionalizing Monitoring and Evaluation (M&E) System

13. Who was undertaking the monitoring and evaluation of Fincha'a Sugar Expansion project? (Please tick the appropriate answer)

☐ A centralized monitoring and evaluation team that has also responsibilities to monitor other sugar development projects under Ethiopian Sugar Corporation.

☐ A monitoring team dedicated to and based in Fincha'a Sugar Expansion project.

14. Please tick the appropriate answer for the following to show your level of agreement.

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	Staff assigned to conduct M&E were sufficient	☐	☐	☐	☐	☐
2	Roles and responsibilities of the staff in M&E clearly defined and clarified.	☐	☐	☐	☐	☐
3	The firm provided training to staff who involved in Monitoring and Evaluation.	☐	☐	☐	☐	☐
4	Monitoring and Evaluation staff had understanding of M&E policy (guidelines, processes, templates, tools) and framework to harmonize M&E concepts	☐	☐	☐	☐	☐

B. Linking Monitoring and Evaluation to Objectives

15. Please tick the appropriate answer for the following to show your level of agreement.

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	There was a clear link between Monitoring and Evaluation systems of Fincha'a Sugar project and that of the Project Administration at Ethiopian Sugar Corporation	☐	☐	☐	☐	☐
2	Monitoring and Evaluation system of Fincha'a Sugar project critically informed Project Administration and that the Project Administration had a direct effect on the operation of Fincha'a Sugar project's M&E system	☐	☐	☐	☐	☐

16. In general, how do you rate the Monitoring and Evaluation elements are linked and communicated with project strategy and operations to implement activities efficiently and effectively? (Please tick the appropriate answer)

Very poor	Poor	Indifferent	Good	Very good
☐	☐	☐	☐	☐

C. Planning for Monitoring and Evaluation

17. Was there a clear plan or road map for Fincha'a Sugar Expansion project?

☐ Yes ☐ No ☐ Not sure

18. Had the project plan a clear strategy for monitoring and evaluation?

☐ Yes ☐ No ☐ Not sure

19. Please tick the appropriate answers for the following questions.

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	Indicators to be measured were noted in the planning document and communicated with all team members and stakeholders	☐	☐	☐	☐	☐
2	Acceptable levels of performance were identified, so that it is clearly understood when the project begins to get out of track	☐	☐	☐	☐	☐
3	Policy (guidelines, processes, templates and tools) required for proper project M&E was sufficiently available	☐	☐	☐	☐	☐
4	Work plans were prepared ahead for the purpose of aligning M&E system with norms and standards	☐	☐	☐	☐	☐
5	The project was monitored and evaluated as per the documented policy or guideline	☐	☐	☐	☐	☐
6	Budgetary and resource allocations were sufficient for monitoring and evaluation practices	☐	☐	☐	☐	☐
7	When the project was not progressing as planned, a timely corrective action was taken as per the findings of the monitoring and evaluation	☐	☐	☐	☐	☐

20. What kind of Monitoring and Evaluation frameworks did Fincha'a Sugar Expansion project use? You can tick more than one if applicable. (Please tick the appropriate answer)

☐ Performance indicators ☐ Logical Framework Approach

☐ Results-based Framework ☐ Logic Model

☐ Formal Survey ☐ Rapid Appraisal Method

☐ Other (please specify): _____

21. Considering Fincha'a Sugar Expansion project, do you think Monitoring and Evaluation planning has made the Project Administration at Ethiopian Sugar Corporation improve/establish the policies and procedures to ensure successful implementation of other sugar development projects? (Please tick the appropriate answer)

☐ Yes ☐ No ☐ Not sure

D. Data Management of Monitoring and Evaluation

22. Please tick the appropriate answers for the following questions

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	Acceptable data collection tools for M&E were selected before starting project implementation	☐	☐	☐	☐	☐
2	Monitoring and Evaluation data were routinely collected and analysed to measure project performance	☐	☐	☐	☐	☐
3	Methods and systems in place to disseminate the findings of Monitoring and Evaluation were effective and efficient	☐	☐	☐	☐	☐
4	Monitoring and Evaluation information was used to assist in decision-making and planning	☐	☐	☐	☐	☐

23. Overall, how do you rate the quality of data management practice of the project during monitoring & evaluation?

Very poor	Poor	Moderate	Good	Very good
☐	☐	☐	☐	☐

E. Stakeholders' Engagement in Monitoring and Evaluation

24. How much were you involved at different stages of the project? (Please tick the appropriate answer)

No.	Statement	Not involved	Less involved	Involved	Much involved	Very much involved
1	Planning/designing stage	☐	☐	☐	☐	☐
2	Implementation stage of the project activities	☐	☐	☐	☐	☐
3	Dissemination of project results	☐	☐	☐	☐	☐
4	Internal monitoring and evaluation of the project	☐	☐	☐	☐	☐
5	Overall management of the project	☐	☐	☐	☐	☐

25. Please tick the appropriate answers for the following questions.

No.	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	Stakeholders across areas of interest were mapped before engaging them in project monitoring and evaluation.	☐	☐	☐	☐	☐
2	Proper stakeholder engagement tool was used to identify stakeholders, define their roles, set the optimum stakeholder group, create an engagement plan, and track stakeholder engagement.	☐	☐	☐	☐	☐
3	Based on evaluation findings, stakeholders who had the power to truly create change were communicated with and involved in decision-making process.	☐	☐	☐	☐	☐

26. Please list any missing challenge/issues in monitoring and evaluation of Fincha'a Sugar Expansion project.

Part IV: Effects of Monitoring and Evaluation on Project Success of Fincha'a Sugar Expansion

27. Please tick the appropriate answer.

No.	Questions	Very low extent	Low extent	Moderate	High extent	Very high extent
1	To what extent M&E effect was on project success to delivered Fincha'a Sugar Expansion project on time?	☐	☐	☐	☐	☐
2	To what extent M&E effect was on project success to delivered Fincha'a Sugar Expansion project to the quality expected?	☐	☐	☐	☐	☐
3	To what extent M&E effect was on project success to complete Fincha'a Sugar Expansion project within budget allocated?	☐	☐	☐	☐	☐
4	To what extent M&E effect was on project success to complete Fincha'a Sugar Expansion project was to satisfy stakeholders?	☐	☐	☐	☐	☐