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ASSESMENT OF MONITORING AND EVALUATINON PRACTICES AND THEIR EFFECTS ON PROJECT PERFORMANCE: THE CASE OF ADDIS ABABA CITY ROAD AUTHORITY

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ABSTRACT

The purpose of this study is to assess the influence of monitoring and evaluation practices on project performance. The research is intended to help and support AACRA in better implementing M&E practices to improve project performance. As a result, a three-section questionnaire was produced and distributed to assess the presence of M&E practices and their level of influence on project performance, as well as what exactly is meant by project performance. For data analysis, SPSS software was utilized. As a result, the M& E practices must be determined, and those that have the greatest impact on project performance. The broad aim of this study was to ascertain the influence of the practices of monitoring and evaluation on the performance of AACRA projects. The specific aims of this research were to determine the influence of M&E Planning, M&E Team Composition, M&E Standards, M&E Staff Training and Data collection techniques on performance of AACRA. The target population for this study was245 respondents. A total number of 152 respondents were targeted. 124 respondents returned their data. The study found out that M&E practices and its adoption significantly influences the project performance Based on the findings from this study, all correlation showed that independent variables (M&E planning, M&E Staff Training and M&E Data Collection Techniques) as mandatory practices influences road construction projects performance thus the study recommended that M&E practices should be embraced in projects management.

Keywords: Construction Project, Monitoring & Evaluation, Influence, Project Performance

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In developing countries, the construction industry serves as a critical driver of economic growth, providing essential infrastructure and employment opportunities. In Ethiopia, the road transportation sector plays a pivotal role in facilitating trade, improving public services, and fostering overall economic development. Despite its significance, the Addis Ababa City Road Authority (AACRA) encounters challenges in project performance, often resulting in cost overruns, delays, and quality issues. Effective Monitoring and Evaluation (M&E) practices are imperative to address these challenges and enhance project outcomes.

1.2 Statement of the Problem

Road construction projects in Addis Ababa frequently encounter performance issues, including cost overruns, delays, and quality deficiencies. Previous studies have identified significant gaps in the implementation of effective M&E practices. This study aims to investigate the factors influencing the performance of AACRA's road construction projects and provide recommendations to enhance their effectiveness.

1.3 Objectives of the Study

1.3.1 General Objective

To investigate how M&E practices influence the performance of AACRA's road construction projects.

1.3.2 Specific Objectives

- To analyze the impact of M&E planning on project performance.
- To evaluate the influence of M&E team composition on project performance.
- To assess the effect of staff training on project performance.
- To examine the role of M&E standards in project performance.
- To identify the impact of data collection techniques on project performance.

1.4 Research Questions

1. How does M&E planning influence the performance of AACRA projects?
2. What is the impact of M&E team composition on project performance?
3. To what extent does staff training affect project performance?
4. How do M&E standards influence project performance?
5. What is the role of data collection techniques in project performance?

1.5 Significance of the Study

This study will bridge the gap between M&E practices and project performance in AACRA, providing insights and recommendations to enhance the effectiveness of road construction projects in Addis Ababa. It aims to improve project management practices, increase efficiency, and ensure better utilization of resources, ultimately contributing to the socio-economic development of Ethiopia.

1.6 Scope of the Study

The study focuses on road construction projects undertaken by AACRA between 2020 and 2023. It involves project managers, site engineers, and other key stakeholders, assessing the current M&E practices and their impact on project performance in terms of time, cost, and quality.

1.7 Limitation of the Study

The study is limited to AACRA road construction projects in Addis Ababa and may not be generalizable to other regions or sectors. Time constraints and access to detailed financial data also pose limitations.

1.8 Organization of the Research

The research is structured into five chapters:

- Chapter One provides an introduction, background, statement of the problem, objectives, research questions, significance, scope, and limitations.
- Chapter Two reviews relevant literature.
- Chapter Three outlines the research methodology.
- Chapter Four presents findings and discussions.

- Chapter Five concludes with a summary of findings, conclusions, and recommendations.

1.9 Definition of Key Terms

- **Monitoring:** Internal oversight that provides management with early indications of progress or lack thereof in achieving results.
- **Evaluation:** The process of examining a program/project to make judgments, improve effectiveness, and inform decision-making.
- **Project:** A temporary activity with a start and finish, employed to produce a unique product, service, or result.
- **Project Performance:** The achievement of specific tasks measured against predetermined standards of accuracy, completeness, cost, and speed.
- **Stakeholder:** An individual or group with an interest in the outcome of a program/project.

CHAPTER TWO: LITERATURE REVIEW

Monitoring and evaluation are a set of components which are related to each other within a structure and serve a common purpose of tracking the implementation and results of a project (SAMDI, 2007). According to Guijt et al. (2002), M&E system is made up of four interlinked sections, which are: setting up of the M&E systems, implementation of the M&E systems, involvement of the project stakeholders, and communication of the M&E results. Theoretically, "an ideal M&E systems should be independent enough to be externally credible and socially legitimate, but not so independent to lose its relevance" (Briceno, 2010).

Monitoring, as well as evaluation, provides opportunities at regular predetermined points to validate the logic of a programme, its activities and their implementation and to adjust as needed. Good planning and designs alone do not ensure results. Monitoring is necessary to ensure that results are achieved. Equally, no amount of good monitoring alone was correct poor programme designs, plans and results. Plans must be reinforced, or improvements must be encouraged using the information gathered from monitoring. Critical information for evaluation is also provided by data from systematic monitoring. It is very difficult to evaluate a programme that is not well designed and that does not systematically monitor its progress

(UNDP, 2006). A Monitoring and Evaluation practice represents all the things that need to be undertaken before, during and after program implementation, in order to track and measure progress (and success) in achieving the goal (Brown, 2016).

- ♦ **M&E Planning**-According to Annie (2009) planning for Monitoring and Evaluation helps an organization can achieve a variety of results which are instrumental in its growth namely; strengthened organizational capacity through skills, staffing and leadership; strengthened alliances through level of coordination, collaboration and mission alignment; strengthened base of support through the grassroots, leadership and institutional relationships and alliances; improved policy through stages of policy change in the public policy arena, including adoption, implementation and funding; shift in social norms through the knowledge, attitude, values and behavior's; changes in impact through the ultimate changes in social and physical lives and conditions. Impact is affected not just by policy change, but by other strategies, such as community support and changes to behaviors (Annie, 2009).

- ♦ **M&E Staff Training**- Training consists of an organization's planned efforts to help employees acquire job-related knowledge, skills, abilities, and behaviors, with the goal of applying on the job (Noe& Hollenbeck,). Regardless of how experienced individual members are, once a team to implement a project has been identified, training and capacity building for M&E reporting is important. This, it has been observed, enhances understanding of the project deliverables, reporting requirements and builds the team together (Wysocki&McGary, 2003).

- ♦ **M&E Standards**- refer to the criteria, principles, and benchmarks used to guide the design, implementation, and assessment of monitoring and evaluation activities. These standards help ensure that M&E processes are conducted systematically, transparently, and rigorously.it measures the development of ongoing activities and recognizes any restrictions for early corrective action (WHO, 2008). They measure the effectiveness and efficiency of the desired impact of the intervention. While monitoring provides an expressive picture of what is happening at a given time. It is a regular, ongoing managerial activity which, through reliable record kept, provides information to program managers on a systematic basis. On the other hand, evaluation provides at large an in-depth analysis on whether a program has achieved its desired objectives (WHO, 2008).

- ♦ **Data collection Techniques**- Data collected from different sources in a project may validate findings through triangulation of collection methods of the M&E system. According to Gebremedhin, Getachew, and Amha (2010), primary data is collected directly by the M&E system and secondary data exist as sources of information for monitoring and evaluation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

This study utilized an explanatory and descriptive research design to elucidate associations or relationships between variables, particularly evaluating monitoring and evaluation (M&E) practices and project performance. Descriptive research designs focus on characterizing the features of a group or individual and determining whether variables are associated (Kothari, 2004). The explanatory approach aims to establish cause-and-effect links between variables, often through ex post facto methods, which examine existing conditions and retrospectively analyze potential causal factors. This design was applied to assess the performance of projects executed by the Addis Ababa City Road Authority (AACRA) based on their M&E practices. A quantitative design was also employed to describe the prevalence or frequency of behaviors or characteristics within the studied population, providing a comprehensive understanding of the study.

3.2 Population and Sample

The target population consisted of three primary stakeholders involved in road construction projects in Addis Ababa—AACRA, contractors, and consultants—participating in both completed and ongoing projects. Specifically, the population included M&E Officers, Project Engineers, Station Engineers, and Team Leaders at AACRA, totaling 245 individuals. These roles were chosen due to their significant influence on project monitoring and evaluation, which directly impacts road infrastructure project performance.

3.3 Data Collection Methods

Data collection incorporated both primary and secondary sources. Primary data were gathered through questionnaires distributed to a selected sample of AACRA's management team

involved in the projects. Secondary data were obtained from project progress reports and evaluations, offering comprehensive insights into the actual conditions and performance of the projects.

3.4 Data Collection Instrument and Design

3.4.1 Questionnaire

The questionnaire, prepared and administered to AACRA program managers, middle managers, and M&E experts, included closed-ended questions designed to capture a range of opinions within a short timeframe. Given the international nature of the organization, the questionnaire was constructed in English. It consisted of sections focusing on M&E practices and their contributions to project performance, facilitating efficient data collection and analysis.

3.5 Data Analysis

Initial checks for errors or missing data were conducted before analysis. Statistical tools, including tabular and graphic presentations, were employed to effectively display the data. The Statistical Package for the Social Sciences (SPSS) version 27 was used to analyze the data from the questionnaires. The multiple regression model used is:

$Y=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\epsilon$ Where:

- Y = Project performance
- X_1 = M&E Planning
- X_2 = M&E Team Composition
- X_3 = M&E Staff Training
- X_4 = M&E Standards
- X_5 = Data Collection Techniques
- β_0 = Constant
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression coefficients
- ϵ = Error term

3.6 Validity and Reliability

3.6.1 Validity

Validity assesses the extent to which an instrument measures what it is intended to measure (Pilot and Hunger, 1985). Instrument validity was tested using IBM SPSS version 27, focusing on construct and structure-related tests through Pearson correlation. The criterion-related validity test (Pearson test) measured the correlation coefficient between each paragraph and the overall field. Significant p-values (less than 0.05) indicated the consistency and validity of each field's paragraphs.

3.6.2 Reliability

Reliability measures the consistency of an instrument. For this study, Cronbach's alpha test was used to evaluate the internal consistency of the questionnaire, with a threshold of 0.7 as recommended by George and Mallery (2003). The Cronbach's Alpha Test results for the variables are:

Table 1: -Cronbach's Alpha Test for Variables.

Variable	Cronbach's Alpha	No of items
M&E Planning	0.752	5
M&E Team Composition	0.731	5
M&E Staff Training	0.769	5
M&E Standards	0.774	5
Data collection techniques	0.728	5

These values indicate acceptable reliability for further study.

3.7 Ethical Considerations

Participants were fully informed about the study's purpose, and their participation was voluntary. The researcher adhered to ethical standards, ensuring participant confidentiality and integrity throughout the study. Recommendations were presented based on the collected data, maintaining accuracy and honesty in the research findings.

CHAPTER 4: DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

4.1 Introduction

This chapter presents the findings derived from the data collected in the study. The chapter is organized into six sections to comprehensively discuss various aspects related to Monitoring and Evaluation (M&E) practices within AACRA (African Agricultural Consultative Research Activities).

4.1 Overview of Findings

This section provides a summary of the key findings from the data collected through questionnaires administered to AACRA personnel.

4.2 Detailed Analysis

This section analyzes the data in relation to each research question posed in the study, focusing on different dimensions of M&E within AACRA.

4.3 Questionnaire Survey Response Rates

The study distributed 152 questionnaires, out of which 124 valid responses were received, resulting in an excellent response rate of 81.6%. This response rate indicates robust participation and enhances the reliability of the findings (Mugenda&Mugenda, 2003; Babbie, 2002).

Respondents' General Information

This section presents demographic data of the respondents, providing insight into their gender, age distribution, educational qualifications, work experience, and job roles within AACRA.

- **Gender**: The majority of respondents were male (63.7%), reflecting a male-dominated workforce within AACRA.
- **Age**: Most respondents were between 31-40 years old (44.4%), followed by 20-30 years old (33.9%), indicating a youthful workforce.
- **Educational Level**: A significant portion held a first degree (78.22%), while 18.55% had a master's degree.
- **Work Experience**: The majority had 5-10 years of experience (62.09%), highlighting a moderately experienced workforce.

- **Job Title**: Site engineers constituted the largest group (46.0%), followed by other designations not specified in educational categories (36.3%).

This demographic profile helps contextualize the responses and understand the backgrounds of the survey participants.

4.4 Descriptive Statistics

4.4.1 Descriptive Results of M&E Planning

This section presents the findings related to the planning aspects of M&E within AACRA.

Table 2: Statistics of M&E Planning of AACRA

Questions	Mean	Std. Deviation
The organization has a well-defined structure that includes a monitoring and evaluation unit	3.23	1.338
The top management has a positive attitude towards the monitoring and evaluation system	2.32	1.332
The organization has monitoring and evaluation action plan and procedure to guide the M&E activities	3.36	1.387
There is a dedicated budget for M & E processes	3.47	1.428
M&E objectives are clearly communicated to employees	3.15	1.403
Average	3.31	1.377

Interpretation: The mean scores indicate moderate satisfaction with M&E planning processes at AACRA, with variability (SD) suggesting areas needing improvement.

4.4.2 Descriptive Results of M&E Team Composition

This section examines the composition and effectiveness of the M&E teams within AACRA.

Table 3: Statistics of M&E Team Composition of AACRA

Questions	Mean	Std. Deviation

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M&E team are composed of professionals	3.33	1.348
M&E team members have adequate technical experience	3.46	1.226
M&E team has good leadership	3.02	1.364
M&E team is well organized	3.53	1.186
M&E team is recruited on a professional criterion base	3.27	1.332
Average	3.32	1.291

Interpretation: The average scores suggest a generally positive perception of the M&E team composition, with good technical experience and organization being highlighted positively.

4.4.3 Descriptive Results of M&E Staff Training

This section evaluates the effectiveness of training programs for M&E staff at AACRA.

Table 4: Statistics of M&E Staff Training of AACRA

Questions	Mean	Std. Deviation
M&E training adequately prepared you for your role in project M&E	3.14	1.416
Relevant training is provided for M&E team	3.53	1.316
There are improvements in project outcome because of M&E staff training	3.33	1.330
Current M&E training programs given in the organization meet your needs	2.65	1.282
The content of M&E training is relevant to day-to-day responsibilities	2.94	1.317
Average	3.11	1.332

Interpretation: While there is positive feedback on the adequacy and relevance of training, improvements in meeting specific needs are suggested.

4.4.4 Descriptive Results of M&E Standards

This section examines the implementation and adherence to M&E standards within AACRA.

Table 5: Statistics of M&E Standards of AACRA

Questions	Mean	Std.

		Deviation
M&E standards are applied in projects	3.44	1.433
Effectiveness is considered in project execution	3.30	1.487
Sustainability of projects are accounted in doing projects	2.98	1.423
M&E standards are followed properly in projects	2.84	1.450
Impacts are studied before implementation of projects	3.55	1.358
Average	3.22	1.430

Interpretation: Results indicate moderate satisfaction with M&E standards application, with areas like sustainability and proper adherence needing attention.

4.4.5 Descriptive Results of Data Collection Techniques

This section evaluates the effectiveness of data collection techniques employed by AACRA.

Table 6: Statistics of Data Collection Techniques of AACRA

Questions	Mean	Std. Deviation
Relevant sources of data about projects are selected	3.12	1.365
Appropriate staff are selected for data collection	3.27	1.421
Adequate data are collected for M&E execution	3.20	1.391
Personal observation of sites is conducted	3.61	1.305
The organization utilize technology in data collection	2.80	1.373
Average	3.20	1.371

Interpretation: While personal observation and staff selection receive positive feedback, technological utilization in data collection requires improvement.

4.4.6 Descriptive Results of Project Performance

This section evaluates the performance of projects conducted by AACRA.

Table 7: Project Performance

Questions	Mean	St. Deviation
Projects in AACRA are delivered in required quality	3.09	1.420
Client satisfaction is given attention in projects	2.93	1.363
Projects in AACRA are done with in appropriate budget	3.42	1.362
Projects are delivered within scheduled time	3.65	1.504
Project activities are done with minimum waste	3.21	1.393
Average	3.26	1.408

Interpretation: Projects generally meet quality and budget expectations but show room for improvement in client satisfaction.

4.5 Regression Analysis

4.5.1 Testing for Violations of Statistical Assumptions

Assumptions such as normality, linearity, homoscedasticity, and multicollinearity were tested to ensure the reliability of the multiple regression analysis.

4.5.2 Measures of Distribution: Skewness and Kurtosis

Results indicate that skewness and kurtosis values were within acceptable ranges, suggesting normal distribution of data (George &Mallery, 2010; Collier, 2020).

Table 8: Skewness and Kurtosis Results for M&E Practices

variables	Skewness		Kurtosis	
	Statistic	**Std. Error of Skewness**	**Statistic**	**Std. Error of Kurtosis**
M&E Planning	-.463	.217	-.614	.431
M&E Team Composition	-.288	.217	-.410	.431
Data collection Techniques	-.046	.217	-1.036	.431
M&E Standard	.122	.217	-.370	.431
M&E Staff Training	-.208	.217	-.964	.431

Interpretation: Skewness and kurtosis values close to zero suggest near-normal distribution of variables.

4.5.3 Multiple Regression Analysis

A multiple regression analysis was conducted to predict project performance based on M&E practices.

Table 9: Multiple Regression Analysis Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2003.324	5	400.665	44.492	<.001[b]
	Residual	1062.636	118	9.005		
	Total	3065.960	123			

a. Dependent Variable: Project Performance

b. Predictors: (Constant), Data Collection Techniques, M&E Standards, M&E Team Composition, M&E Planning, M&E Staff Training

4.6 Interpretation of Findings

M&E Planning, Staff Training, and Standards significantly predict project performance, while Team Composition and Data Collection Techniques have less impact.

the regression model provided statistical control through which the study established the influence of each predictor variable. Holding all variables at zero will result in a positive project performance equal to 11.883. In a similar way, keeping all other independent

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variables constant, a unit change on Monitoring and Evaluation planning will result in 0.745 increments in project performance. This means that Monitoring and Evaluation planning had a great influence on increasing the project's performance in the AACRA. The statistically significance level of this variable is 0.01 which is less than (<) p-value (0.05).

The other interesting variable in this regression model is M&E Team Composition. As can be derived from the table above, M&E Team Composition has a negative effect on project performance. M&E Team Composition has a value of B = 0.076 with p value < 0.05. The result implies that M&E Team Composition has a positive and significant effect on project performance. Based on the coefficients indicated above, for one unit increase in M&E Team Composition, there is a increase in project performance by 0.073 units.

The third findings indicate that M&E Staff Training will result in a 0.329 increment in project performance, while holding the rest of independent variables constant would lead to a increase in project performance.

The other output that can be extracted from the table is M&E Standards, From the regression result it can be seen that M&E Standards ($\beta= 0.020$) is not significant as $p=0.804$ which is greater than 0.05 significant level.

CHAPTER 5: DISCUSSION

5.1 Interpretation of Findings

The findings of this study provide significant insights into the influence of Monitoring and Evaluation (M&E) practices on project performance within AACRA. The theoretical framework underlying this study posited that effective M&E, encompassing planning, team composition, training, standards, and data collection techniques, would positively impact project outcomes.

M&E Planning

M&E planning emerged as a critical factor positively impacting project performance. The structured approach involving defined structures, action plans, approaches, and budget

allocations correlates with improved project outcomes (Martinez, 2015; Smith & Schmitz, 2017). Organizations that integrate M&E planning into project initiation phases tend to achieve higher levels of project success and stakeholder satisfaction (Alkin& Christie, 2016).

M&E Team Composition

Contrary to expectations, M&E team composition did not show a significant positive relationship with project performance in AACRA. Issues such as leadership quality, organizational effectiveness, and technical expertise within the team did not consistently contribute to enhanced project outcomes as hypothesized (Patton, 2018; Fournier &Malenfant, 2017). This suggests that while team composition is important, other factors such as coordination and communication dynamics may play larger roles in project success.

M&E Staff Training

The findings underscore the importance of M&E staff training in improving project performance. Adequate and relevant training programs positively influence staff competencies and their ability to execute M&E tasks effectively (Bamberger &Rugh, 2016; Mackay & Bickerstaff, 2014). Continuous professional development ensures that M&E staff remain updated with industry standards and best practices, thereby contributing to project efficiency and effectiveness.

M&E Standards

Implementation of M&E standards was found to have a mixed impact on project performance within AACRA. While standards related to effectiveness and sustainability showed some positive correlations, challenges in proper implementation and adherence were noted (Grebner& Cahill, 2016; Rist, 2017). Clearer guidelines and enforcement mechanisms are recommended to optimize the benefits of standardized M&E practices across projects.

Data Collection Techniques

Effective data collection techniques emerged as a significant contributor to project performance. The utilization of relevant sources, appropriate staff selection, and technological integration in data collection processes enhanced data quality and decision-making capabilities (Mertens, 2014; Robson, 2016). Modern technologies offer opportunities

to streamline data collection, ensuring real-time insights and adaptive management strategies in project execution.

Synthesis of Findings

The integrated analysis of these findings supports the theoretical framework positing that comprehensive M&E practices significantly influence project performance. While certain variables like M&E planning, staff training, and data collection techniques demonstrated robust positive impacts, challenges remain in optimizing team composition and standardization efforts within AACRA's project framework.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Key Findings

This study explored the impact of Monitoring and Evaluation (M&E) practices on project performance within AACRA. Key findings indicate that M&E planning, staff training, and data collection techniques significantly influence project outcomes. Conversely, challenges persist in optimizing M&E team composition and standardization efforts.

The regression analysis revealed that approximately 65.3% of project performance variability is explained by M&E practices, underscoring their critical role in project success. While M&E planning, staff training, and data collection methods exhibited positive correlations with project performance, team composition and standards implementation showed less conclusive impacts.

6.2 Recommendations

Practical Recommendations for Improving M&E Practices

Based on the findings, the following recommendations are proposed:

1. **Strengthen M&E Planning**: Integrate comprehensive M&E plans into project initiation phases to align goals, resources, and timelines effectively.

2. **Enhance Team Dynamics**: Address leadership gaps and improve team coordination and collaboration to enhance project delivery.

3. **Invest in Continuous Training**: Implement regular training programs tailored to M&E roles to enhance staff competencies and adaptability.

4. **Optimize M&E Standards**: Develop clear guidelines and enforcement mechanisms to ensure consistent and effective implementation of M&E standards.

5. **Embrace Technological Solutions**: Leverage technology for data collection to improve accuracy, efficiency, and decision-making in project monitoring and evaluation.

These recommendations aim to strengthen AACRA's M&E framework, promoting transparency, accountability, and efficiency across project cycles.

6.3 Suggestions for Future Research
Areas for Future Exploration

Despite valuable insights gained, several avenues for future research are identified:

- **Longitudinal Studies**: Conduct longitudinal studies to track the long-term impact of improved M&E practices on project sustainability and community development outcomes.
- **Comparative Analyses**: Compare M&E practices across different sectors and organizations to identify sector-specific best practices and challenges.
- **Technology Integration**: Investigate emerging technologies' impact on M&E practices and their potential to revolutionize project monitoring and evaluation.
- **Qualitative Studies**: Explore stakeholders' perceptions and experiences to complement quantitative findings and enrich understanding of M&E dynamics.

These research areas aim to address gaps in current knowledge and enhance the effectiveness of M&E practices in diverse organizational contexts.

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