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**THE PRACTICES OF PROJECT MANAGEMENT OFFICES IN PUBLIC
BUILDING CONSTRUCTION PROJECTS: THE CASE OF SELECTED
ORGANIZATIONS IN ADDIS ABABA**

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*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

DECLARATION

I hereby declare that this thesis, titled “*The Practices of Project Management Offices in Public Building Construction Projects: The Case of Selected Organizations in Addis Ababa,*” is an original work prepared by me and has not been submitted to any other university or institution for the award of a degree or diploma.

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RECOMMENDATION OF ADVISOR

As the advisor for this thesis, I hereby certify that I have thoroughly reviewed the thesis, titled ***“The Practices of Project Management Offices in Public Building Construction Projects: The Case of Selected Organizations in Addis Ababa,”*** prepared by Marsimoyi Weyuma Dame. This thesis has been completed under my supervision and meets the standards required for the partial fulfillment of the requirements for the degree of Master of Science in Construction Technology and Management.

I recommend that this thesis be submitted to the school, adhering to the prescribed academic procedures and guidelines.

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Date

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*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

TABLE OF CONTENTS

DECLARATION.....	ii
RECOMMENDATION OF ADVISOR.....	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	ix
LIST OF TABLES	xi
ABBREVIATIONS.....	xii
ABSTRACT.....	xiv
CHAPTER ONE	1
1. INTRODUCTION	1
1.1. Background and Context of the Study	1
1.2. Statement of the Problem	2
1.3. Research Questions	3
1.4. Research Objectives	3
1.4.1. General objective (Aim)	3
1.4.2. Specific objectives	3
1.5. Significance of the Study	4
1.6. Scope and Delimitations of the Study	4
1.7. Structure of the Report	5
CHAPTER TWO	7
2. LITERATURE REVIEW	7
2.1. Introduction	7
2.2. Theoretical and Conceptual Framework	7
2.2.1. Project management theory	8
2.2.2. Project management competency and maturity	8
2.3. Project Management Offices (PMOs)	10

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

TABLE OF CONTENTS (Continued)

2.3.1. History of PMOs.....	10
2.3.2. Evolution of PMOs.....	10
2.3.3. Functions of PMOs.....	11
2.3.4. Types of PMOs	14
2.4. PMO: A Continuum of Practices to Enhance Project Management Capability	16
2.4.1. PMO maturity levels and their corresponding roles	16
2.4.2. Local adaptation: PMO and project management maturity in Ethiopia	17
2.5. Establishing Project Management Offices (PMOs)	19
2.5.1. Procedures for implementing PMOs	21
2.5.2. Benefits of implementing PMOs	21
2.5.3. Obstacles/challenges in PMO implementation.....	22
2.6. Organizational Structures in Project Management: Structural Models.....	23
2.6.1. Functional organizational structure	23
2.6.2. Projectized organizational structure	25
2.7. Organizational Structures in Project Management: Institutional Perspectives	27
2.7.1. Project-based organizations (PBOs).....	27
2.7.2. Non-project-based organizations (non-PBOs).....	28
2.8. The Role and Practices of PMOs in the Construction Industry	30
2.9. Contextual Challenges in the Ethiopian Construction Sector	32
2.10. PMO Framework in the Construction Industry.....	34
2.11. Benchmarking PMO Practices against Global Standards, Frameworks, and Best Practices: ‘ <i>accepted practices</i> ’	36
2.12. Literature Gaps and Rationale for the Study	39
2.13. Conceptual Framework of the Study.....	40
CHAPTER THREE	44

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

TABLE OF CONTENTS (Continued)

3. METHODOLOGY	44
3.1. Introduction	44
3.2. The Role of Preliminary Study in Research Design	44
3.3 Research Type, Strategy, and Analytical Approach	46
3.4. Justification of the Methodology Used: Selection of the Research Method	49
3.5. Selection of the Case	51
3.6. Method of Data Collection Adopted	53
3.7. Analysis and Interpretation Techniques	56
3.8. Measures to Ascertain Research Quality	58
3.9. Case Study Protocol	59
3.10. Conclusion.....	62
CHAPTER FOUR.....	63
4. DATA ANALYSIS AND DISCUSSIONS	63
4.1. Overview of Data Collection and Analysis Methods	63
4.2. Discussion of Findings	64
4.2.1. The case study of Mega Project Construction Office (MPCO).....	65
4.2.2. The case study of Commercial Bank of Ethiopia (CBE).....	81
4.2.3. The case study of Ethiopian Electric Utility (EEU)	99
4.3. Comparative Analysis of PMO Practices across Case Studies	116
4.4. Conclusion.....	120
4.5. Cross-Case Synthesis and Discussion	120
4.5.1. Within-case analysis	121
4.5.2. Cross-case analysis	122
4.5.3. Implications and reflections of the findings	123
CHAPTER FIVE	125

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

TABLE OF CONTENTS (Continued)

5. CONCLUSION AND RECOMMENDATIONS	125
5.1. Introduction	125
5.2. Summary of Major Findings	125
5.3. Research Questions/Objectives Revisited.....	126
5.4. Theoretical and Practical Contributions.....	129
5.5. Reflection on Research Approach and Output.....	130
5.6. Recommendations	130
5.7. Limitations of the Study and Future Areas of Research.....	131
REFERENCES	133
APPENDICES	133

LIST OF FIGURES

Figure 2.1: Project vs enterprise-oriented functions of PMO	13
Figure 2.2: Construction project management maturity levels	18
Figure 2.3: A hypothetical model of cost of implementing and sustaining a PMO in relation to cost of continuous project failures.....	20
Figure 2.4: Project functional organizational structure.....	24
Figure 2.5: Projectized organizational structure	26
Figure 2.6: Proposed PMO conceptual framework for project-based organization	36
Figure 2.7: Conceptual framework of the study	43
Figure 3.1: Linking preliminary study findings to case study design.....	46
Figure 3.2: Thematic analysis framework	49
Figure 3.3: Methodology flowchart of the study	62
Figure 4.1: Demographic characteristics of MPCO survey respondents.....	66
Figure 4.2: An overview of the organizational structure of PMO/PO of MPCO	68
Figure 4.3: A frequency distribution of PMO training focus areas at MPCO	71
Figure 4.4: A frequency distribution of PMO key drivers at MPCO.....	73
Figure 4.5: A frequency distribution of PMO primary roles at MPCO	74
Figure 4.6: A frequency distribution of PMO’s major challenges at MPCO	75
Figure 4.7: A frequency distribution of PMO’s major challenges at MPCO on 5-point Likert scale	76
Figure 4.8: A frequency distribution of PMO’s contributions at MPCO on 5-Point Likert scale	77
Figure 4.9: PMO [challenges, contribution and effectiveness] on 5-Point Likert scale	78
Figure 4.10: Demographic characteristics of CBE survey respondents	81
Figure 4.11: An overview of the organizational structure of PMO/PO of CBE.....	84
Figure 4.12: A frequency distribution of PMO staffing criteria at CBE	86
Figure 4.13: A frequency distribution of PMO training focus areas at CBE.....	88
Figure 4.14: A frequency distribution of PMO key drivers at CBE	91
Figure 4.15: A frequency distribution of PMO primary roles at CBE.....	92
Figure 4.16: A frequency distribution of PMO’s major challenges at CBE.....	93

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

LIST OF FIGURES (Continued)

Figure 4.17: A frequency distribution of PMO’s major challenges at CBE on 5-point Likert scale	94
Figure 4.18: A frequency distribution of PMO’s contribution at CBE on 5-point Likert scale ...	95
Figure 4.19: CBE’s PMO [challenges, contribution and effectiveness] on 5-point Likert scale..	96
Figure 4.20: Demographic characteristics of EEU’s survey respondents.....	100
Figure 4.21: An overview of the PPMO/PO's organizational structure at EEU	101
Figure 4.22: A frequency distribution of PMO staffing selection criteria at EEU	103
Figure 4.23: A frequency distribution of PMO training focus areas at EEU.....	105
Figure 4.24: A frequency distribution of PMO key drivers at EEU	108
Figure 4.25: A frequency distribution of PMO primary roles at EEU.....	109
Figure 4.26: A frequency distribution of PMO’s major challenges at EEU	111
Figure 4.27: A frequency distribution of PMO’s major challenges at EEU on 5-point Likert scale	112
Figure 4.28: A frequency distribution of PMO’s contribution at EEU on 5-Point Likert Scale	113
Figure 4.29: EEU’s PMO [challenges, contribution and effectiveness] on 5-point Likert scale	114

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

LIST OF TABLES

Table 2.1: Comparative summary: functional vs. projectized structures.....	27
Table 2.2: Comparative summary: PBOs vs. non-PBOs	30
Table 3.1: Summary of key informants (interviewee) from the case study organizations	55
Table 3.2: Summary of survey respondents from the case study organizations [Distributed]	56
Table 4.1: Summary of survey respondents from the case study organizations [Responded]	64
Table 4.2: PMO size, level of influence, and years of operation at MPCO.....	67
Table 4.3: A frequency distribution of PMO staffing selection criteria at MPCO	69
Table 4.4: Descriptive statistics of PMO [challenges, contribution and effectiveness] at MPCO	78
Table 4.5: A summary of PMO size, level of influence, and years of operation at CBE	83
Table 4.6: Descriptive statistics of PMO [challenges, contribution and effectiveness] at CBE96	96
Table 4.7: A Summary of PMO size, level of influence, and years of operation at EEU	102
Table 4.8: Descriptive statistics of PMO [challenges, contribution and effectiveness] at EEU114	

ABBREVIATIONS

AADC	—Addis Ababa Design and Construction Bureau
AAU	—Addis Ababa University
CBE	—Commercial Bank of Ethiopia
CCMPO	—Civil Construction Management Program Office
CEO	—Chief Executive Officer
CID	—Construction Industry Development
CMM	—Capability Maturity Model
CoE	—Center of Excellence
CRM	—Customer Relationship Management
EEU	—Ethiopian Electric Utility
ECA	—Ethiopian Construction Authority
ECPMI	—Ethiopian Construction Project Management Institute
ECPMMS	—Ethiopian Construction Project Management Manual Series
EMI	—Ethiopian Management Institute
EMC	—Executive Management Committee
EPMO	—Enterprise Project Management Office
ERP	—Enterprise Resource Planning
ETB	—Ethiopian Birr
FDRE	—Federal Democratic Republic of Ethiopia
GTP	—Growth and Transformation Plan
HR	—Human Resource
IPMA	—International Project Management Association
ISO	—International Standardization Organization
KM	—Knowledge Management
KPI	—Key Performance Indicators
MoPD	—Ministry of Planning and Development
MUDC	—Ministry of Urban Development and Construction
MPCO	—Mega Projects Construction Office
OPM	—Organizational Project Management

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

OPM3—Organizational Project Management Maturity Model
PBO—Project Based Organization
PM—Project Management
PMP—Project Management Professional
PMO-CP—PMO Certified Practitioner
PMBOK—Project Management Body of Knowledge
PMI—Project Management Institute
PMMM—Project Management Maturity Model
PMO—Project Management Office
PPMD—Project Portfolio Management Directorate
PRINCE—Project IN Controlled Environment
P3O—Project, Program, Portfolio Office
P3M3—Portfolio, Program and Project Management Maturity Model
SEI—Software Engineering Institute
SPO—System Program Office
VPFM—Vice President of Facility Management
WM—Working Manual

ABSTRACT

Project Management Offices (PMOs) have emerged as key institutional mechanisms in Ethiopia's public construction sector for improving project governance and execution. Despite their growing prominence, many PMOs are not fully integrated into enterprise-level governance structures, and project outcomes are frequently below expectations. This study investigates PMO practices, challenges, and effectiveness in three public building construction organizations in Addis Ababa: the Mega Projects Construction Office (MPCO), Commercial Bank of Ethiopia (CBE), and Ethiopian Electric Utility (EEU). An exploratory, descriptive, and explanatory multiple-case study design was employed, along with a qualitative-dominant mixed-methods approach. Data were triangulated across 21 semi-structured interviews, 33 structured survey responses, and a review of organizational documents. The data were analyzed using thematic and content analysis supported by descriptive statistics. The findings show that PMOs have improved cost control and schedule adherence, but their impact is limited by departmental boundaries, fragmented governance structures, poor risk management practices, and low stakeholder engagement. Capacity gaps remain due to a lack of a structured recruitment framework, an overreliance on experience-based staffing, a low adoption of professional certifications, and inconsistencies in training provision. Systemic challenges, including fragmented regulatory frameworks, and frequent leadership turnover, continue to inhibit PMO effectiveness. The study concludes by proposing policy- and practice-oriented recommendations to strengthen PMO governance, institutionalize competency-based staffing, enhance structured training systems, and adopt global project management standards and frameworks to the specific context of Ethiopia's public construction sector. The findings contribute to a better understanding of PMO practices in developing country contexts, addressing a critical gap in empirical research and providing practical insights for improving project governance in Ethiopia's public construction sector.

Keywords: Project Management Office (PMO); Public Building Construction Projects; Project-based Organization; Project Management Practices; Public Construction Sector

CHAPTER ONE

1. INTRODUCTION

1.1. Background and Context of the Study

The construction sector plays a vital role in Ethiopia's socioeconomic development. It significantly contributes to national GDP, employment generation, and the provision of essential infrastructure (MUDC, 2013). National development plans, including Growth and Transformation Plans, GTP I and II (2010–2020) and the Ten-Year Development Plan (2021–2030), articulate the sector's strategic role in advancing economic transformation and fostering regional integration through a focus on infrastructure-led development (MoPD, 2021).

Despite its socioeconomic contributions and the livelihoods it supports, Ethiopia's construction industry has long been criticized for inefficiency and ineffective project delivery (Solomon, 2015). Chronic issues such as project delays, cost overruns, and poor output quality continue to undermine the public trust and the sector's potential (Abdurezak & Neway, 2019; Zinabu, 2016). These inefficiencies are largely rooted in weak institutional coordination, fragmented regulatory frameworks, and limited managerial capacity (Desalegn & Mahesh, 2020a). Moreover, the absence of standardized governance systems and consistent project management practices has further contributed to poor delivery performance (Wubishet, 2004).

In response to the above shortcomings, Project Management Offices (PMOs) have been introduced within public sector institutions to improve project governance, standardize practices, and align project outcomes with strategic goals (Mijić, 2015; Santos & Varajão, 2015). A PMO is an organizational entity that supports the centralized and coordinated management of projects, typically through defining best practices, ensuring consistency, and providing oversight (Dai & Wells, 2004; PMI, 2013; Solomon et al., 2006). When effectively implemented, PMOs can enhance decision-making, ensure resource optimization, and institutionalize learning. However, PMO adoption in Ethiopia's public construction sector remains inconsistent.

A preliminary study conducted across selected institutions—including the Mega Projects Construction Office (MPCO), the Commercial Bank of Ethiopia (CBE), Ethiopian Telecommunication (Ethio Telecom) and the Ethiopian Electric Utility (EEU)—shows that PMO

structures, mandates, and functional capacities vary widely. Some institutions operate enterprise-level PMOs embedded in strategic decision-making frameworks, while others maintain PMOs as administrative units with limited autonomy and scope. All PMOs exhibit characteristics consistent with Level 3 of the Organizational Project Management Maturity Model (OPM3): standardized practices exist in some knowledge areas, but adaptability, methodological consistency, and strategic responsiveness are lacking (Crawford, 2021; ECPMI, 2019). These disparities point to underlying structural and institutional barriers that prevent the full realization of PMO benefits.

This study explores PMO practices across diverse public institutions in Addis Ababa, representing both project-based and non-project-based organizations. It seeks to understand how PMOs are structured and governed, their role in project performance, and the institutional and operational factors influencing their effectiveness. In doing so, the research aims to provide evidence-based recommendations to strengthen PMO functions, inform policy, and support improved public infrastructure delivery in Ethiopia.

1.2. Statement of the Problem

Despite the adoption of Project Management Offices (PMOs) as strategic solutions, Ethiopia's public construction sector continues to experience systemic inefficiencies. These inefficiencies manifest in the form of project delays, escalating costs, and inconsistent quality (Abdurezak & Neway, 2019; Solomon, 2015; Zinabu, 2016). While PMOs have been established to address such issues, their operational effectiveness is often compromised due to institutional, structural, and capacity challenges.

Preliminary study findings indicate that in many organizations, PMOs lack clear mandates, operate with insufficient staffing, and have limited authority over strategic decisions. For instance, in institutions such as MPCO and CBE, PMOs function primarily as support units, whereas EEU and Ethio Telecom demonstrated a more mature and strategically integrated PMO model. These inconsistencies reflect broader governance and coordination gaps, including weak policy enforcement, inadequate interagency collaboration, and a lack of mechanisms for continuous improvement.

Moreover, there is limited empirical research exploring PMO practices in the Ethiopian public construction sector. Most existing studies focus on general project management challenges without examining how PMOs operate within specific organizational contexts. As a result, in the absence of evidence-based insights into the structure, practices, and challenges of PMOs, reform initiatives risk misalignment with institutional realities and may fail to yield substantive improvements.

This study fills a gap in the literature by conducting a context-specific analysis of PMO practices in selected public institutions. It investigates PMO structures, governance mechanisms, and functional performance while identifying institutional and operational barriers to effectiveness. The aim is to contribute to the development of more robust, strategically integrated PMOs that support the efficient delivery of public construction projects. Thus, the study contributes not only to internal organizational reform but also to the professionalization of project management practices in Ethiopia's public sector.

1.3. Research Questions

Based on the problem statement formulated above, the study attempts to answer the following fundamental research questions.

- What are the current PMO practices in Ethiopia's public building construction sector, particularly in terms of governance, structure, staffing, capacity building, and primary roles? To what extent do these practices deviate from '*accepted practices*'?
- What potential institutional and operational challenges do PMOs in the public building construction sector experience? How do they impact PMO effectiveness?

1.4. Research Objectives

1.4.1. General objective (Aim)

The main objective of this study is to explore the practices of Project Management Offices (PMOs) in the Addis Ababa public building construction sectors and compare these practices to globally recognized frameworks, standards, and best practices (hereafter '*accepted practices*') and identify potential gaps, challenges, and improvement strategies.

1.4.2. Specific objectives

This study is guided by three major research objectives.

- Explore the current practices of Project Management Offices (PMOs) in the public building construction sectors and identify areas for improvement.
- Identify potential institutional and operational challenges impeding PMO performance in the public building construction sector.
- Compare local PMO practices to globally recognized frameworks, standards, and best practices, and suggest evidence-based recommendations for improving PMO effectiveness in the local context.

1.5. Significance of the Study

Theoretically, the study contributes to the growing body of literature on PMO practices in emerging economies by providing a context-specific analysis of how institutional, organizational, and environmental factors influence PMO effectiveness. By contextualizing the findings within established '*accepted practices*', the study emphasizes the importance of governance, competency development, and strategic integration in determining PMO effectiveness. It also extends existing models by highlighting the particular challenges faced by PMOs in resource-constrained public sector environments, where bureaucratic inertia, skill shortages, and fragmented governance systems prevail.

In practice, policymakers, practitioners, and organizational leaders can benefit from the study's insightful recommendations for improving public-sector construction projects delivery performance. By mapping current practices to global '*accepted practices*', the study provides a clear framework for identifying inefficiencies and implementing reforms. As a result, the study not only informs internal organizational reforms but also contributes to broader efforts to professionalize project management practices in Ethiopia's public sector.

1.6. Scope and Delimitations of the Study

This study explores the practices of Project Management Offices (PMOs) within selected public building construction organizations in Addis Ababa, Ethiopia. Focusing on strategically selected organizations—both project-based and non-project-based organizations—the research explores institutional variations in PMO maturity, governance frameworks, staffing strategies, capacity-building efforts, operational challenges, and strategic alignment.

Thematically, the study focuses on PMO governance, staffing, capacity development, operational challenges, and alignment with organizational strategy, while comparing local practices to globally recognized frameworks, standards, and best practices—'*accepted practices*'. Geographically, the study is limited to organizations operating in Addis Ababa, where a significant proportion of public construction projects are planned and monitored.

Methodologically, it employs a qualitative-dominated multiple-case study design to generate in-depth organizational insights using semi-structured interviews and document reviews (partially). To enhance triangulation and augment limited access to internal operational documents due to institutional confidentiality policies and prevailing poor documentation culture of the case study organizations, a quantitative insight obtained through supplementary structured survey was designed.

The study does not include private sector organizations or other infrastructure sectors other than building construction, nor does it quantify project-level outcomes such as cost or time performance. Its primary focus is on understanding the institutional and organizational factors that influence PMO effectiveness in the public building construction sector.

1.7. Structure of the Report

This thesis is organized into five interrelated chapters that collectively contribute to addressing the research objectives and questions.

Chapter One introduces the study, presenting the background and context, the research problem, objectives, and questions. It also discusses the significance, scope and delimitations of the study, laying the groundwork for future research.

Chapter Two reviews the relevant literature, including theoretical and conceptual perspectives on project management and PMOs. It covers the historical evolution, types, functions, and maturity of PMOs, as well as organizational structures in project-based and non-project-based organizations. The chapter contextualizes the Ethiopian public construction sector, discusses benchmarking practices, identifies literature gaps, and concludes with the conceptual framework that guides the empirical investigation.

Chapter Three details the research methodology. It begins with insights from a preliminary study that shaped the research design and case selection. The chapter explains the qualitative case study approach, data collection methods (interviews, structured surveys, and document reviews), and analytical techniques, particularly Braun and Clarke's six-phase reflexive thematic analysis. The case study protocol, as well as measures to ensure research quality, are also discussed.

Chapter Four provides a comprehensive analysis and discussion of the empirical data. It begins with an overview of the case study organizations and continues with thematic discussions for each case. The data is discussed thematically and conceptually, with each PMO case analyzed individually before conducting a comparative cross-case analysis. The themes are derived from the conceptual framework and refined through fieldwork insights. Cross-case comparisons are conducted to identify commonalities and differences in PMO practices and challenges.

Chapter Five concludes the study by summarizing the key findings, revisiting the research questions and objectives, and discussing the theoretical and practical implications. The chapter ends with reflections on the research process and presents recommendations for enhancing PMO effectiveness in Ethiopia's public construction sector.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

Project management offices (PMOs) have evolved into strategic units that improve performance delivery, institutional alignment, and project governance in sectors such as public infrastructure development projects, where accountability and complexity are paramount. PMOs, which were initially developed as administrative support systems, are now utilized as organizational interfaces to ensure strategic alignment, standardize project processes, and promote effective supervision. Thus, this section discusses how project management offices (PMOs) can improve project governance, delivery efficiency, and strategic alignment, particularly in Ethiopia's public construction sector.

The literature review discusses the conceptual and empirical foundations of PMOs, with an emphasis on their evolution, functions, types, maturity levels, and implementation challenges. Although PMO practice has advanced globally, little attention has been paid to the Ethiopian context, and there is a scarcity of empirical data on PMO practices in the public construction sectors.

The construction industry receives special attention due to its significant role in national development, operational complexities, and reliance on structured project delivery systems. As a result, this review emphasizes the significance of contextualizing PMO practices in Ethiopian public construction organizations in order to improve project governance, institutional capacity, and policy implementation.

2.2. Theoretical and Conceptual Framework

Project Management Offices (PMOs) rely on strong conceptual and theoretical frameworks to support modern project management practices. These foundations not only influence the operational design of PMOs but also their strategic significance in improving project outcomes, particularly in complex public infrastructure contexts. This section introduces and discusses the conceptual and theoretical underpinnings that have shaped the evolution and development of project management offices.

2.2.1. Project management theory

Project management theory is central to PMO development, emphasizing a systematic approach to project execution that includes planning, implementation, monitoring, and control (PMI, 2013). One of the most enduring conceptual tools within this framework is the Iron Triangle, which asserts that project success is dependent on a triangular balance of time, cost, and quality (Atkinson, 1999). However, as project complexity grew, particularly in the public infrastructure sector, this narrow focus widened.

Contemporary research identifies several success dimensions, including stakeholder satisfaction, risk management, and alignment with organizational strategy (Serrador & Turner, 2015). This paradigm shift highlights the limitations of traditional models while emphasizing the significance of PMOs as multifaceted governance structures that not only support project delivery but also protect institutional interests.

2.2.2. Project management competency and maturity

The concept of organizational project management (OPM) maturity has gained significant attention in the field of project management, providing structured methodologies for assessing and enhancing an organization's ability to execute projects effectively. Maturity models are diagnostic tools that enable organizations to assess their project management capabilities, identify gaps, and implement strategic improvements that are aligned with organizational goals (Solomon et al., 2006). It is an iterative process that involves evaluating and improving existing processes to ensure they are consistent with industry best practices.

Several maturity models have been developed to improve OPM maturity, with each offering unique frameworks tailored to different organizational contexts. Each of these models has distinct advantages that contribute to improved project execution, expanded market opportunities, and structured progress toward strategic objectives (Solomon et al., 2006).

Among the most widely referenced is the SMART Project-Based Maturity Model, developed by the University of Calgary. This model emphasizes strategic alignment and organizational transformation through project-based performance improvements. It assesses maturity using a

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

metrics-driven approach, identifying areas of strength and weakness to facilitate targeted interventions (Judgev & Thomas, 2002; Lin & Wang, 2021).

Another influential framework is the Capability Maturity Model (CMM), originally developed by the Software Engineering Institute (SEI). Though initially designed for software development environments, CMM has demonstrated its adaptability across diverse industries. It outlines five progressive stages of maturity, each representing increasing levels of process standardization and optimization. The model's structured approach to incremental improvement supports organizations seeking long-term process refinement and quality enhancement (Paulk et al., 1993).

Kerzner's Project Management Maturity Model (PMMM) further advances the field by integrating theoretical foundations with practical implementation strategies. The model offers a comprehensive pathway for developing project management capabilities, guiding organizations through multiple levels of maturity while ensuring alignment with broader strategic goals (Kerzner, 2002). Kerzner's PMMM model demonstrates its effectiveness in bridging the gap between strategic vision and project execution.

The Organizational Project Management Maturity Model (OPM3), developed by the Project Management Institute (PMI), presents a globally recognized standard for OPM assessment. The model provides a systematic approach to evaluating and applying best practices across portfolio, program, and project management disciplines. Its emphasis on aligning project execution with strategic intent ensures sustained organizational performance and resilience (Fahrenkrog et al., 2003).

In conclusion, combining these theoretical and empirical insights demonstrates PMOs' dual role as operational and strategic entities. The evolution of project management theory, from the Iron Triangle to holistic success metrics, has provided a compelling rationale for integrating PMOs into broader organizational governance frameworks.

2.3. Project Management Offices (PMOs)

2.3.1. History of PMOs

The Project management office (PMO) concept dates back to the early twentieth century and was influenced by Frederick Taylor's scientific management principles (Crawford, 2010). The term 'project office' originated in the 1930s, when the United States Air Corps established a project office to oversee aircraft development. The evolution continued into the 1950s, when the U.S. military implemented System Program Offices (SPOs) to manage complex missile systems. These early offices pioneered standardized practices in budgeting, phased planning, and resource forecasting, laying the groundwork for modern project management approaches (*ibid.*).

By the 1980s, the PMO concept had spread beyond military applications and gained acceptance in industries such as construction and information technology, aided in part by advances in computing technology (Giraud & Monaldi, 2015). In the decades that followed, particularly by the late 1990s, PMOs had evolved into critical organizational units dedicated to improving project outcomes through centralized governance, resource allocation, and methodological standardization.

Moreover, the introduction of project management standards and certification frameworks such as PRINCE2 (Projects IN Controlled Environments), PMI (Project Management Institute), and the International Project Management Association (IPMA) signaled a significant shift toward the professionalization of project management practices (Hill, 2004). Over time, PMOs have evolved from administrative support units to strategic entities that align project initiatives with the larger organizational goals. This transformation demonstrates the growing complexity of organizational environments, as well as the importance of adaptive, value-driven project oversight.

2.3.2. Evolution of PMOs

Prior to the 1990s, PMOs were primarily limited to the defense and aerospace industries, where customer relationship management (CRM) was critical (Solomon et al., 2006). However, after the 1990s, PMOs became widely recognized across various industries, with responsibilities extending beyond customer relationship management to include organizational governance, capacity development, and performance measurement (*ibid.*).

One of the most significant changes in PMO evolution has been the adoption of standardized project management methodologies, tools, and templates (Hill, 2004). This change broadened PMO responsibilities to include portfolio governance, strategic oversight, and performance monitoring (Bredillet et al., 2018). As a result, PMOs are today an essential component of decision-making processes, assisting with resource prioritization, policy coherence, and institutional learning (Mijić, 2015). Their evolving role includes facilitating knowledge management and capacity development, especially in volatile or resource-constrained environments such as those in many developing countries (Santos & Varajão, 2015).

Modern project management offices contribute to project governance by establishing clear roles and responsibilities, monitoring mechanisms, and accountability frameworks that improve transparency and control (Aubry et al., 2007). They promote alignment with organizational goals by guiding project selection and prioritization processes (Giraud & Monaldi, 2015). They also promote organizational learning by organizing lessons learned, facilitating knowledge exchange, and incorporating continuous improvement into project cycles (Rad & Levin, 2002).

To summarize, the transformation of PMOs from administrative bodies to strategic units highlights their critical role in improving project success and institutional performance. This trend is particularly relevant in Ethiopia's public sector, where PMOs have untapped potential for addressing systemic inefficiencies and improving governance capacity in the construction industry. Understanding their historical evolution and strategic functions provides a solid foundation for studying their role in public infrastructure management.

2.3.3. Functions of PMOs

Project Management Offices (PMOs) have evolved into pivotal organizational entities that fulfill both tactical and strategic roles. PMO functions can be broadly divided into two categories: project-oriented functions, which help to deliver individual projects, and enterprise-oriented functions, which help to develop organizational project management capabilities over time (Solomon et al., 2006).

Beyond these foundational roles, PMOs operate across three interdependent domains: project-oriented execution, enterprise-level strategic alignment, and portfolio-level integration. This

tripartite structure allows PMOs to support the day-to-day management of individual projects while also contributing to broader organizational governance and long-term strategic planning (Crawford, 2010; Rad & Levin, 2002).

Project-oriented functions

At the project level, PMOs assist with the immediate implementation of initiatives by mentoring, consulting, and augmenting project teams. These efforts include deploying experienced personnel to guide project delivery, providing supplemental resources to fill skill or capacity gaps, and providing expert advice to address project-specific issues (Rad & Levin, 2002; Solomon et al., 2006).

In addition to this hands-on support, PMOs institutionalize standardized project management practices. This includes establishing consistent reporting templates, project charters, kickoff facilitation, risk assessments, and administrative support. Such standardization facilitates knowledge transfer, reduces effort duplication, and embeds best practices across projects (Hobbs & Aubry, 2007; PMI, 2013). PMOs improve efficiency and project outcomes by ensuring consistency in methodology and tool usage. Moreover, PMOs optimize resource allocation across concurrent initiatives. By identifying interdependencies and potential conflicts, PMOs can ensure that human and material resources are optimally deployed, reducing execution risks and improving overall performance (Crawford, 2010).

Enterprise-oriented functions

Beyond the project level, enterprise PMOs (EPMOs) are concerned with long-term organizational development. They serve as centers of excellence, promoting project management maturity and cultivating a culture of continuous improvement. These functions include (Rad & Levin, 2002; Solomon et al., 2006):

- **Education and training:** Delivering structured programs to develop project management competencies organization-wide.
- **Documentation and dissemination:** Capturing lessons learned from past projects and distributing them as knowledge assets.

- **Methodology development:** Establishing standards, frameworks, and templates that formalize project execution practices.
- **Benchmarking and continuous improvement:** Evaluating internal processes against industry standards and implementing improvement plans.

EPMOs play a strategic role in aligning project portfolios with overall organizational goals. They facilitate strategic planning and prioritization, directing attention and resources toward high-value initiatives (Bredillet et al., 2018). EPMOs also play an important role in corporate governance by implementing accountability frameworks, compliance protocols, and performance monitoring systems, which increase transparency and organizational resilience (Aubry et al., 2007).

Portfolio-level integration

PMOs contribute to portfolio management by balancing project selection with organizational capacity and priorities. Portfolio-level integration ensures that resource deployment is optimized and aligned with dynamic business or policy conditions (Aubry, 2011). They act as intermediaries between executive leadership and project teams, translating strategic vision into actionable project roadmaps. Furthermore, PMOs improve stakeholder engagement by encouraging cross-functional collaboration and facilitating communication between internal and external partners.

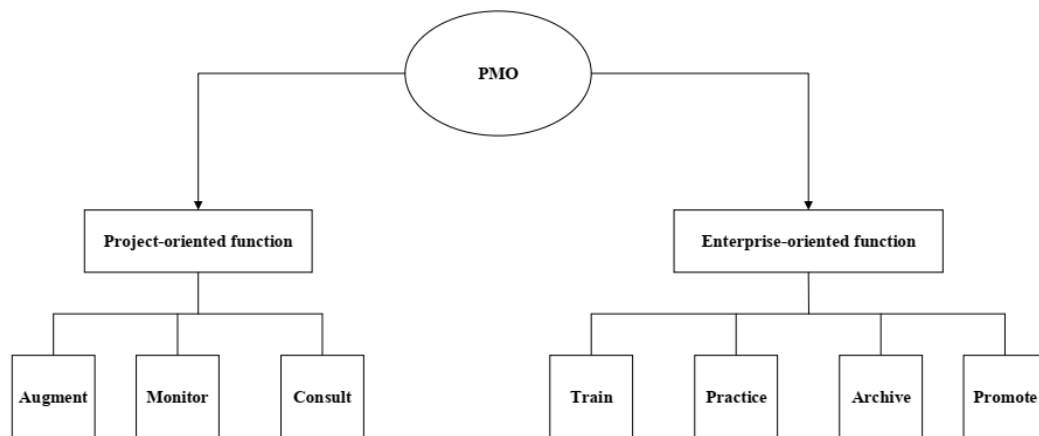


Figure 2.1: Project vs enterprise-oriented functions of PMO¹

¹ Project vs. enterprise-oriented functions of PMO according to Rad & Levin, (2002) as cited by Solomon et al. (2006).

In conclusion, PMOs are more than just operational entities; they are strategic instruments that institutionalize governance, promote alignment with organizational goals, and improve knowledge management. PMOs become critical to project success, institutional capacity building, and adaptability in complex development environments as they transition from project support roles to strategic leadership functions. Particularly within the public sector, where projects are often large-scale and multi-stakeholder, PMOs serve as essential governance mechanisms that bridge execution, oversight, and strategic direction.

2.3.4. Types of PMOs

The structure and role of a Project Management Office (PMO) can vary significantly depending on the organization's strategic needs, size, and complexity. According to the Project Management Body of Knowledge (PMBOK Guide)—Fifth Edition, a PMO is a formal structure responsible for standardizing project-related governance and facilitating the sharing of methodologies, tools, techniques, and resources across projects (PMI, 2013).

PMOs can be categorized based on two key criteria: their level of influence over projects and their organizational positioning (Giraud & Monaldi, 2015). Understanding these distinctions allows organizations to design and implement PMOs that align with their specific strategic and operational requirements.

PMO types by level of influence

PMOs differ in the degree of authority they exercise over projects. These variations influence how project governance is implemented and the extent of compliance required by project teams (PMI, 2013).

- a) Supportive PMOs:** These offices operate primarily in a consultative role, offering templates, training, lessons learned, and best practices. They function as information repositories with minimal enforcement power. This type is most effective in organizations with a relatively low need for control, where project teams are already mature and self-directed.
- b) Controlling PMOs:** These PMOs provide support while also enforcing compliance with governance structures, including mandatory methodologies, tools, or project review

processes. Their moderate level of control helps ensure standardization and consistency across projects without micromanaging execution.

- c) **Directive PMOs:** These PMOs assume a high level of control by directly managing projects. They are responsible for project execution and are typically staffed with full-time project managers. This structure ensures strict adherence to organizational standards and is often found in organizations with high project complexity or strategic sensitivity.

PMO types by organizational position

In addition to their influence, PMOs can also be classified by their scope of operation within the organizational structure (PMI, 2013).

- a) **Individual PMO:** The individual PMO is designed to support a single, complex project or program by focusing on planning, control, and coordination for that initiative. This is common in large-scale or mission-critical projects that necessitate extensive supervision.
- b) **Departmental PMO:** These PMOs are responsible for multiple projects within a specific department or business unit. They assist in aligning project execution with departmental goals and integrating various initiatives across the unit. This structure is especially advantageous in matrix or functional organizations.
- c) **Corporate PMO (or Enterprise PMO—EPMO):** These PMOs operate at the highest organizational levels, establishing standards, developing methodologies, and overseeing portfolio management across the enterprise. They also manage strategic alignment and resource allocation, which contributes to improved project performance and maturity across the enterprise.

To summarize, understanding the various types of PMOs allows organizations to tailor the structure, authority, and positioning of their PMOs to their strategic needs and operational maturity. Whether functioning in a supportive, controlling, or directive capacity, and whether positioned at the individual, departmental, or corporate level, PMOs serve as essential structures for enhancing project governance, consistency, and success.

2.4. PMO: A Continuum of Practices to Enhance Project Management Capability

2.4.1. PMO maturity levels and their corresponding roles

The development of Project Management Offices (PMOs) within organizations reflects a continuum of practices aimed at improving project management (PM) capabilities and aligning project activities with strategic goals (Solomon et al., 2006). As organizations grow in project maturity, PMOs transition through several distinct levels, each representing a higher degree of integration, influence, and strategic relevance. This developmental path corresponds to models such as the Organizational Project Management Maturity Model (OPM3), which depicts the gradual improvement of PM competencies across the enterprise (*ibid.*).

Level 1: The Project office

At the foundational level, the project office provides direct support to individual project managers, primarily on large or complex initiatives. Its functions include assisting with planning, scheduling, and administrative tasks while ensuring adherence to organizational policies, procedures, and standards. This level typically focuses on the implementation of basic project management practices at the project level.

Level 2: Basic PMO

The basic PMO emerges as a centralized support function that oversees multiple projects, often within a program. It promotes standardization across projects by establishing consistent methodologies, monitoring progress, identifying risks, and disseminating best practices. The emphasis at this stage is on achieving consistency and improving control across a portfolio of related projects.

Level 3: Standard PMO

As organizations seek to institutionalize project management, the standard PMO integrates practices across departments or business units. It enhances project governance, builds organizational PM competency, and supports broader coordination efforts. This level marks a shift toward embedding project management as a core organizational capability, rather than as an ad hoc function.

Level 4: Advanced PMO

The Advanced PMO plays a strategic role by aligning project execution with broader business objectives. It fosters the integration of project management processes with other organizational systems and functions, creating a “projectized” culture where projects serve as vehicles for strategic execution. At this stage, the PMO becomes instrumental in optimizing value delivery and ensuring strategic alignment.

Level 5: Center of Excellence (CoE)

At the highest maturity level, the PMO transforms into a Center of Excellence (CoE), providing enterprise-wide oversight of project management practices. The CoE is responsible for fostering continuous improvement, innovation, and strategic adaptability. It not only ensures alignment with long-term business goals, but it also leads transformation initiatives, establishing the PMO as a driver of organizational excellence and change.

2.4.2. Local adaptation: PMO and project management maturity in Ethiopia

In the Ethiopian context, organizational project management refers to the skills and capabilities that enable consistent and predictable project delivery (ECPMI, 2019). Reflecting international practices, Ethiopia’s construction industry has adopted a hierarchical model to assess construction project management maturity (Crawford, 2021).

Adapted from global standards, this model provides a structured path for the public sector to benchmark and improve its project management capabilities. This locally contextualized model delineates five levels of maturity (Crawford, 2021; ECPMI, 2019):

- **Level 1—initial process:** Characterized by minimal or ad hoc project management practices, often triggered by external contractual obligations. Processes, when present, are undeveloped and reactive.
- **Level 2—structured process and standards:** Some structured practices emerge for key projects, though they remain inconsistently applied across the organization.
- **Level 3—organizational standards and institutionalized processes:** Project management practices are standardized and applied organization-wide, informed by internal data and industry benchmarks.

- **Level 4—managed process:** Processes are fully integrated with corporate functions, and performance is routinely measured and analyzed to inform decisions.
- **Level 5—optimizing process:** The organization engages in continuous improvement, using performance data to adapt and refine project strategies.

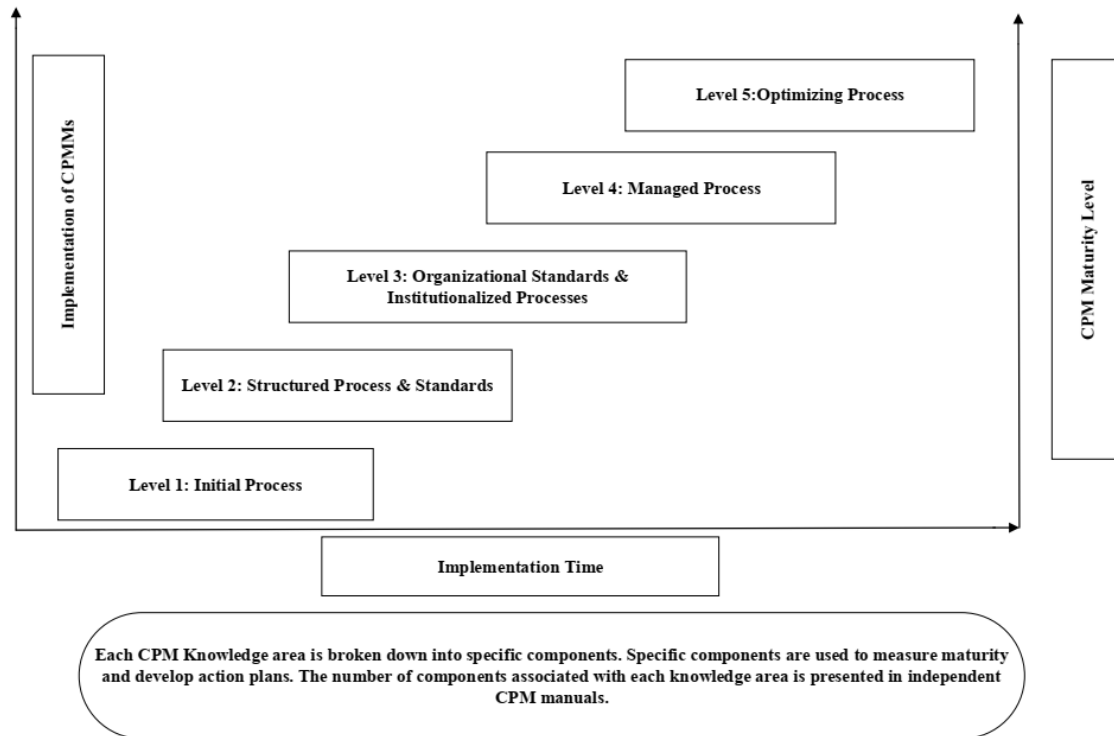


Figure 2.2: Construction project management maturity levels²

This hierarchical maturity model provides a roadmap for organizations—particularly within the Ethiopian public construction sector—to progressively enhance project delivery practices. The structured adoption of such a model supports improved outcomes, fosters institutional learning, and promotes strategic adaptability within dynamic project environments.

² Construction Project Management Maturity Levels adapted from Ethiopian Construction Project Management Manuals Series developed by Ethiopian Construction Project Management Institute (ECPMI, 2019)

Strategic implications of PMO maturity

As organizations progress through these maturity levels, the PMO's role changes from tactical support to strategic business partner. Higher-level PMOs, particularly the Advanced PMO and CoE, focus on long-term goals and enterprise-wide transformation rather than day-to-day project activities (Solomon et al., 2006). This strategic orientation is exemplified by the strategic project office, a more advanced type of PMO that drives project management excellence and organizational innovation.

The alignment of the PMO continuum with Ethiopia's construction project maturity framework reveals a strategy for integrating global best practices with local institutional realities. This alignment not only improves project management effectiveness, but it also enhances public institutions' ability to deliver large-scale infrastructure and development programs with greater precision and impact.

2.5. Establishing Project Management Offices (PMOs)

The establishment of a project management office (PMO) is fundamentally linked to an organization's level of project management maturity. According to Solomon et al. (2006), organizations with high maturity levels (Level five) often have informal yet deeply integrated PMO functions. In such environments, establishing a PMO typically involves minimal investment and focuses primarily on the reorganization of existing resources (Rad & Levin, 2002). Conversely, organizations at a lower maturity level (Level one) require substantial investment in developing the foundational tools, processes, and structures necessary for PMO establishment.

Although the explicit costs of establishing a PMO—such as training, software acquisition, and change management—can be significant, these are often outweighed by the implicit costs associated with poor project performance (Rad & Levin, 2002). These include delays, cost overruns, and compromised quality. As organizations mature, the sophistication of their PMOs tends to increase, requiring enhanced competencies and greater resource commitments. However, this maturity also contributes to reducing failure-related costs, as project execution becomes more predictable and aligned with strategic objectives.

Rad & Levin (2002) argued that the establishment of a PMO contributes not only to the improvement of project outcomes in terms of time, cost, and quality but also to the development of a project management culture and the achievement of competitive advantage. For successful implementation, organizations must clearly define the PMO's objectives and functions, assess existing project management practices, and ensure sufficient corporate commitment and resource allocation.

Furthermore, Rad & Levin (2002) proposed a diagnostic framework to assess an organization's current capabilities and determine the most appropriate level of PMO development. These assessments help align the structure and funding of the PMO with organizational goals—whether the aim is to enhance the performance of individual projects, integrate departmental project activities, or elevate the organization's overall project management maturity.

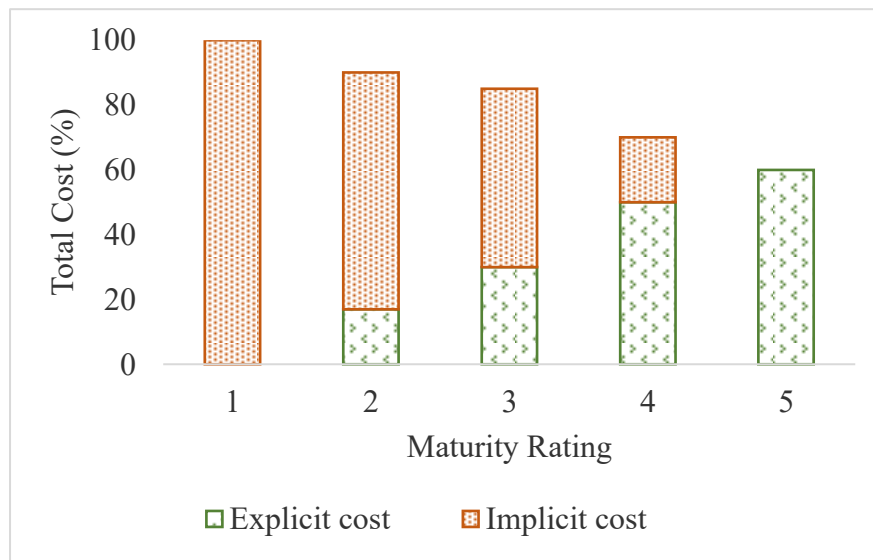


Figure 2.3: A hypothetical model of cost of implementing and sustaining a PMO in relation to cost of continuous project failures³

³ A hypothetical model of cost of implementing and sustaining a PMO in relation to cost of continuous project failures according to Rad & Levin (2002)

2.5.1. Procedures for implementing PMOs

A PMO should be implemented as a well-planned initiative. A phased approach is recommended, especially in less mature organizations, starting with support for specific projects and gradually expanding to enterprise-level operations. The following steps provide a general framework for implementation (Rad & Levin, 2002; Solomon et al., 2006):

- **Vision and strategy development:** The PMO's vision should align with overarching organizational goals and reflect project management needs. It may be integrated into existing structures or established independently.
- **Implementation plan development:** This phase involves defining roles and responsibilities, addressing transitional strategies, and managing cultural and power dynamics.
- **Priority setting and planning:** PMO priorities should align with organizational goals—from operational support for single projects to driving transformational change.
- **Collaboration and knowledge sharing:** Encouraging stakeholder engagement and fostering communication across departments are critical for enhancing project management practices.
- **Project support and facilitation:** Early success in project execution is crucial for building credibility and progressing the maturity of the PMO.
- **Sustained operation and improvement:** Regular evaluation and iterative improvement of PMO processes ensure long-term success and adaptability.

These steps should be contextualized based on each organization's culture, strategy, and structure to ensure relevance and effectiveness.

2.5.2. Benefits of implementing PMOs

PMOs deliver value across three organizational levels—operational, tactical, and strategic (Monteiro et al., 2016):

- **Operational level:** PMOs offer structured project support and standardize processes to ensure consistent execution.
- **Tactical level:** They manage project portfolios, coordinate interdependencies, and optimize resource utilization.

- **Strategic level:** PMOs facilitate alignment between projects and corporate strategy, ensuring value-driven project selection and execution.

In addition to their governance role, PMOs function as knowledge brokers (Gomo et al., 2021; Hadi et al., 2022) identify three knowledge brokering roles:

- **Bottom-up learning:** Insights from project teams are communicated to strategic leadership, promoting experiential learning.
- **Top-down learning:** Strategic directives are translated into actionable guidance at the operational level.
- **Horizontal learning:** Peer-to-peer knowledge sharing enhances collaboration and harmonizes practices across teams.

Through these roles, PMOs foster a culture of continuous improvement and organizational learning, contributing to sustained project success and strategic agility.

2.5.3. Obstacles/challenges in PMO implementation

Despite the benefits, establishing PMOs is not without difficulties. Solomon et al. (2006) identified several common obstacles, including

- **Resistance to change:** Organizational culture often presents resistance to structural changes and new governance mechanisms.
- **Skill gaps:** The lack of qualified project management professionals can impede the PMO's functionality.
- **Resource limitations:** Financial constraints and limited executive support may delay or derail PMO initiatives.
- **Misalignment with strategy:** Ensuring that PMO activities are aligned with organizational goals remains a persistent challenge.
- **Ineffective risk and resource management:** Poor handling of risks and inadequate resource coordination can undermine the PMO's objectives.

To overcome these barriers, Al Khoori & Abdul Hamid (2022) emphasize the importance of top management commitment, effective stakeholder engagement, and clearly defined success metrics

(both qualitative and quantitative). To overcome these obstacles, a phased and adaptable implementation strategy is frequently required.

In conclusion, establishing PMOs is a strategic investment that allows organizations to increase project success rates, align projects with strategic goals, and improve project management maturity. Despite implementation challenges, the long-term benefits—such as improved governance, better resource utilization, and improved organizational learning—underline PMOs' critical role in today's project-oriented environments.

2.6. Organizational Structures in Project Management: Structural Models

In project management, selecting the appropriate organizational structure is essential for resource coordination, decision-making efficiency, and project focus. The way an organization structures its human and material resources can either enhance or hinder project success. PMI standards (PMI, 2021) and studies by Santos & Varajão (2015) and Umasekar (2024) clarified that project structure has a significant impact on outcomes, particularly in public construction sectors where coordination and alignment are essential.

This section introduces and discusses the two most common project management organizational structures: functional organizational structure and projectized organizational structure. A brief overview of their characteristics, benefits, limitations, and project delivery implications will be provided, drawing on established frameworks and academic literature.

2.6.1. Functional organizational structure

The functional organizational structure groups employees based on their specialized functional areas—such as marketing, finance, engineering, and human resources—each managed by a functional head (ECPMI, 2019). Project activities are dispersed among these departments and coordinated through the existing hierarchy.

Advantages:

- **Deep functional expertise:** This structure maximizes technical excellence by placing employees in roles aligned with their specialties.

- **Cost efficiency:** Resources and staff remain within established departments, avoiding the redundancy and overhead costs associated with separate project teams.
- **Stable environment:** The functional model supports long-term career development within a discipline, offering continuity and role clarity

Disadvantages:

- **Silo operations:** Interdepartmental collaboration can be difficult, leading to integration issues across project components.
- **Slow decision-making:** The hierarchical approval chain delays responsiveness to project needs.
- **Diluted project focus:** Functional responsibilities often overshadow project priorities, reducing project visibility and ownership.

This structure is best suited for routine, technically oriented projects that prioritize expertise and process efficiency over adaptability and speed.

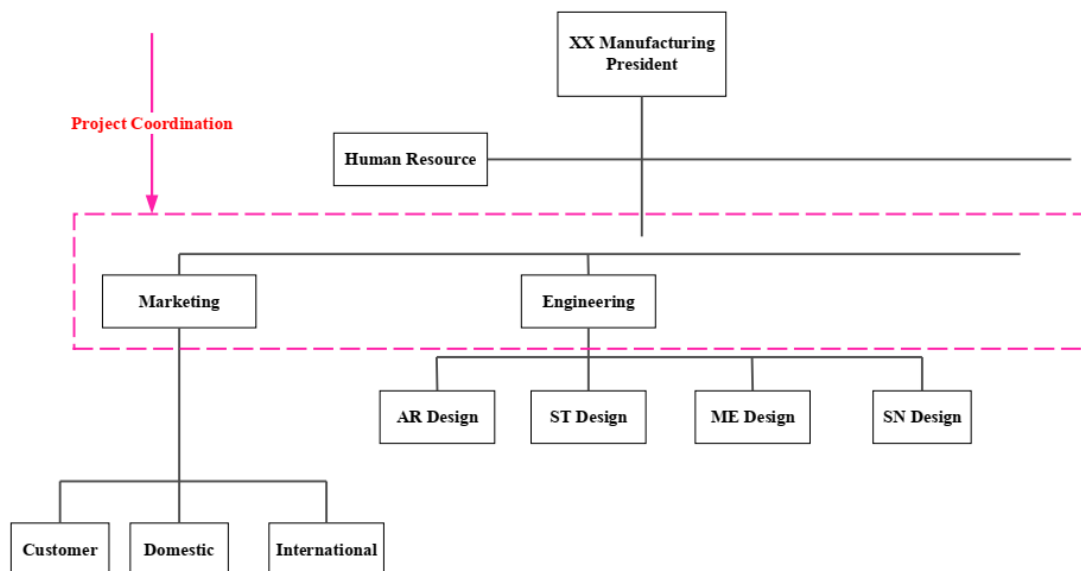


Figure 2.4: Project functional organizational structure⁴

⁴ A sample project functional organizational structure adapted from adapted from Ethiopian Construction Project Management Manuals Series developed by Ethiopian Construction Project Management Institute (ECPMI, 2019)

2.6.2. Projectized organizational structure

The projectized structure, also known as the dedicated project team model, forms temporary, cross-functional teams that focus solely on a specific project (ECPMI, 2019). All team members report directly to the project manager, who is in full control of decision-making, budgeting, and scheduling.

Advantages:

- **Rapid decision-making:** Authority is centralized under the project manager, enabling quick responses and adaptive planning.
- **Strong team cohesion:** A dedicated team encourages shared goals, high motivation, and clearer communication.
- **Greater accountability:** Project performance is directly linked to a single leadership line, enhancing control and focus.

Disadvantages:

- **Post-project reintegration:** Upon completion, staff may face difficulties returning to their original functional roles, disrupting knowledge continuity.
- **Resource duplication:** The need for full-time team members can be resource-intensive, especially in multi-project environments.
- **Organizational disconnection:** Dedicated teams may become isolated from institutional support structures and broader strategic alignment.

This structure is especially beneficial for high-risk, fast-paced, or innovative projects that require strong leadership and multidisciplinary collaboration. While functional structures encourage operational efficiency and expert oversight, projectized structures offer greater flexibility and goal orientation. The decision between the two must take into account factors such as project complexity, urgency, and strategic significance.

Implications for project performance and PMO integration

The organizational structure influences not only how projects are managed but also how project management offices (PMOs) function within organizations. Sokhanvar et al. (2014) found that PMO maturity and effectiveness are dependent on alignment with organizational structures and

knowledge flow. In functional settings, PMOs can act as coordinating bodies, facilitating cross-departmental project oversight. In projectized contexts, they often take on a governance or support role—ensuring consistency and performance measurement across multiple projects (Godbole, 2014).

Santos & Varajão (2015) and Umasekar (2024) emphasized that PMOs bridges the gap between operational execution and strategic alignment. A strategically embedded PMO ensures standardized practices, facilitates knowledge sharing, and aligns projects with broader organizational goals, regardless of structure.

In conclusion, organizational structure has a significant impact on project delivery and organizational agility. Functional structures optimize resource use and technical specialization but can hinder cross-functional collaboration and timely project execution. Projectized structures, on the other hand, encourage speed, focus, and accountability but at the expense of potential redundancy and reintegration issues. Ultimately, the choice of an organizational model must take into account an organization's strategic priorities, project characteristics, and operational maturity.

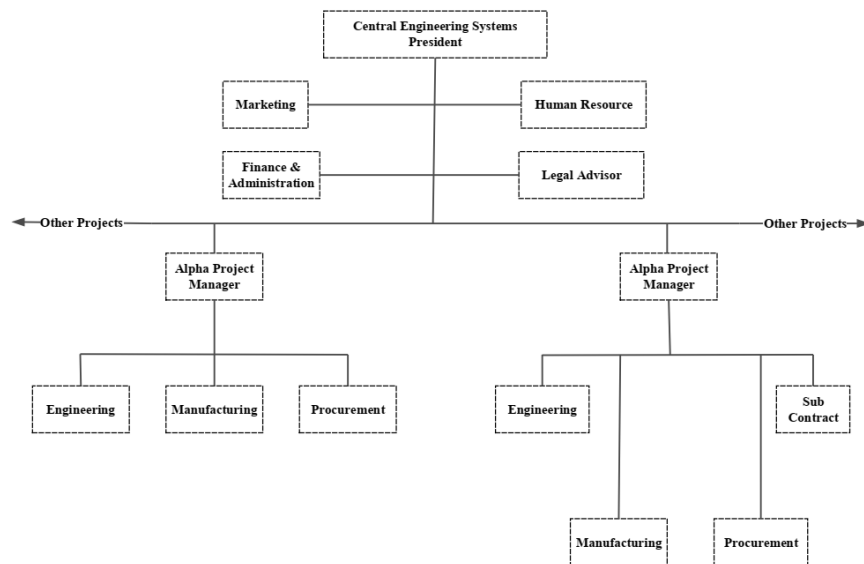


Figure 2.5: Projectized organizational structure⁵

⁵ A sample projectized organizational structure adapted from adapted from Ethiopian Construction Project Management Manuals Series developed by Ethiopian Construction Project Management Institute (ECPMI, 2019)

Table 2.1: Comparative summary: functional vs. projectized structures

<i>Characteristic</i>	<i>Functional Structure</i>	<i>Projectized Structure</i>
<i>Authority of project manager</i>	Limited	High
<i>Resource allocation</i>	Shared across departments	Dedicated to the project
<i>Decision-making speed</i>	Slow, due to hierarchical coordination	Fast, centralized under project manager
<i>Focus on project goals</i>	Secondary to functional responsibilities	Primary, due to team dedication
<i>Integration with organization</i>	Strong departmental connection	Risk of isolation from the broader structure
<i>Cost efficiency</i>	High (uses existing structures)	Lower (requires dedicated resources)

2.7. Organizational Structures in Project Management: Institutional Perspectives

Building on the previous discussion of functional and projectized structures, this section broadens the discussion by examining the broader institutional arrangements under which these structures operate—specifically, comparing and contrasting project-based organizations (PBOs) and non-project-based organizations. This institutional lens is especially relevant in public-sector construction environments like Ethiopia, where organizational maturity has a direct impact on project outcomes.

2.7.1. Project-based organizations (PBOs)

Definition and key characteristics

Project-based organizations (PBOs) represent a distinct organizational model where projects constitute the central units of production, coordination, and value creation. Unlike traditional functional or matrix structures, PBOs are intended to carry out time-bound, outcome-focused initiatives that are directly aligned with strategic goals (Hobday, 2000). This model is particularly common in the construction, engineering, and information technology sectors.

PBOs typically operate under decentralized governance, wherein authority, accountability, and resources are distributed among project teams (Turner & Keegan, 2000). This encourages flexibility, quick decision-making, and cross-functional collaboration. The adoption of a PBO structure is often driven by the complexities associated with managing large-scale, multi-stakeholder projects. This structure improves strategic alignment and promotes institutional learning (Dai & Wells, 2004).

PBOs in the Ethiopian construction sector

In Ethiopia, the construction industry is increasingly recognizing the value of PBOs. The growing scale and complexity of infrastructure projects have increased interest in project-centric models (Desalegn & Mahesh, 2020a). Contractors, consultants, and project-mature public entities, such as the Ethiopian Roads Administration, are examples of PBOs. These organizations are better suited to managing complex construction projects due to their embedded project management culture and systems (ECPMI, 2019).

Regardless of their strengths, PBOs face unique challenges, particularly in public-sector environments. Decentralized authority can sometimes lead to fragmentation, resource competition, and accountability issues (Aubry et al., 2012). Systemic constraints such as weak institutional frameworks, bureaucratic inertia, and underdeveloped project management capabilities have been reported to impede PBO effectiveness in the local context (Desalegn & Mahesh, 2020a).

In conclusion, PBOs provide a dynamic and adaptable approach to managing complex projects. Their decentralized organizational structure encourages innovation, collaboration, and strategic alignment. However, realizing their full potential in Ethiopia necessitates institutional reform, capacity building, and a culture of accountability and learning.

2.7.2. Non-project-based organizations (non-PBOs)

Definition and key characteristics

Non-PBOs are structured around permanent functions and enduring processes rather than temporary, project-oriented initiatives. These organizations typically prioritize operational stability and service continuity. Project management in such organizations is often embedded

within functional silos, with limited influence over strategic decisions (Gyawali et al., 2013; Turner & Keegan, 2000).

Non-PBOs in Ethiopia's construction sector

ECPMI (2019) states that non-project-based entities, such as public sector clients, may lack the organizational maturity or embedded capabilities required for effective construction project management. It is recommended that such entities either build internal capacity or outsource key project functions to experienced consultants to ensure proper governance.

The Evolving role of PMOs

PMOs in non-PBO organizations have emerged as key change agents. They support process standardization, professionalization of project practices, and alignment with organizational goals (Aubry et al., 2008; PMI, 2013). PMOs promote a more project-aware culture by utilizing governance frameworks, knowledge systems, and capacity development initiatives.

Challenges constraining PMO effectiveness

Despite their promise, PMOs in non-PBOs frequently face persistent challenges (Al Khoori & Abdul Hamid, 2022; Solomon et al., 2006):

- **Bureaucratic inertia:** Hierarchical structures slow down decision-making.
- **Limited autonomy:** PMOs lack authority to enforce project standards.
- **Resource constraints:** Underfunding and understaffing reduce PMO effectiveness.
- **Cultural resistance:** Functional biases limit the institutionalization of project methodologies.

To summarize, while non-PBOs provide stability, they often struggle with project delivery efficiency. Where project activity is recurrent, building internal capacity or outsourcing key functions becomes crucial. In such cases, PMOs serve as a bridge, but their success is dependent on strategic empowerment and cultural change.

Table 2.2: Comparative summary: PBOs vs. non-PBOs

<i>Characteristic</i>	<i>Project-based organizations (PBOs)</i>	<i>Non-project-based organizations (non-PBOs)</i>
<i>Organizational focus</i>	Project-centric operations	Operational continuity and compliance
<i>Structure type</i>	Decentralized, flexible teams	Hierarchical, functionally driven
<i>Project management role</i>	Core driver of organizational output	Supportive or advisory (e.g., PMO)
<i>Decision-making</i>	Fast, autonomous project level	Slow, due to hierarchy
<i>Integration with strategy</i>	Strong alignment with project goals	Weak alignment, projects as support tools
<i>Flexibility and responsiveness</i>	High, responsive to change	Low, limited agility
<i>Common challenges</i>	Fragmented accountability, resource completion	Bureaucratic inertia, limited autonomy

2.8. The Role and Practices of PMOs in the Construction Industry

Project Management Offices (PMOs) have emerged as a strategic tool for improving the performance and governance of project-based organizations across a wide range of industries. PMOs offer a structured approach to improving operational efficiency, strategic alignment, and project outcomes in the construction industry, which is characterized by fragmented delivery structures, complex stakeholder arrangements, and temporary project teams (Monteiro et al., 2016; Umasekar, 2024).

One of the most important contributions of PMOs is the standardization of project management processes. When multiple contractors, consultants, and subcontractors collaborate on a regular basis, inconsistencies in methods and tools can result in coordination failure and miscommunication. PMOs address these issues by implementing standardized templates, procedures, and performance metrics that promote consistency and clarity across project teams,

improving communication and project delivery outcomes (Crawford, 2010; Hill, 2004; Solomon et al., 2006).

Knowledge management (KM) is another critical function of PMOs in the construction industry. Because construction projects are temporary and decentralized, valuable experiential knowledge is frequently lost upon completion, especially when formal mechanisms for post-project review and knowledge capture are absent (Dai & Wells, 2004; Hill, 2004; Solomon et al., 2006). PMOs address this gap by establishing knowledge-sharing platforms and processes that facilitate the documentation, transfer, and reuse of lessons learned, ultimately promoting continuous improvement and organizational learning (Philbin, 2016). By implementing such practices, PMOs help to reduce repeated mistakes, shorten learning curves, and enable project-wide innovation.

Despite these advantages, PMOs in the construction industry face significant implementation challenges. A major issue is the fragmentation inherent in construction services, where disparate stakeholders frequently pursue competing interests and operate under different organizational cultures (Sergeeva & Ali, 2020). PMOs attempt to foster cohesion by providing integrative frameworks; however, the diversity of practices and interests across projects makes integration difficult to achieve without strong governance mechanisms.

This issue is exacerbated by widespread resistance to change within the industry (Dai & Wells, 2004; Solomon et al., 2006). Construction firms frequently rely on informal practices and resist the institutionalization of standardized project management approaches introduced by PMOs. This cultural resistance is exacerbated by a lack of understanding of the benefits of the PMO, as well as a perceived threat to existing power structures and autonomy. Overcoming such barriers necessitates persistent leadership advocacy, change management strategies, and the demonstration of tangible benefits associated with PMO integration.

On the other hand, the success of PMOs in construction is heavily dependent on senior management support and investment in capacity-building initiatives. A lack of top-level commitment can hinder PMO authority and resourcing, limiting their ability to enforce standards and influence decision-making (Crawford, 2010; Dai & Wells, 2004). Furthermore, there is a significant gap in the availability of trained and certified project management professionals

capable of working within PMO structures. Many construction companies continue to rely on experiential knowledge rather than formally trained personnel, undermining the standardization and rigor that PMOs are intended to introduce (*ibid.*).

Nonetheless, when strategically implemented, PMOs provide significant benefits to construction firms. They improve governance by defining clear roles, responsibilities, and accountability mechanisms that increase transparency and stakeholder trust. This is especially important in large-scale public construction projects, where oversight and performance monitoring are essential (Crawford, 2021; Philbin, 2016). PMOs also help to improve resource management by facilitating better planning, allocation, and utilization of human and material resources, resulting in cost savings and timely project delivery (Monteiro et al., 2016). These benefits position PMOs as strategic enablers of improved organizational performance, particularly in environments where construction activities are rapidly expanding and under increasing pressure to deliver within tight budgets and time frames.

In conclusion, PMOs represent a transformative mechanism for addressing long-standing inefficiencies and fragmentation in the construction sector. Their potential to drive standardization, improve knowledge retention, and strengthen governance frameworks makes them essential for improving project and organizational outcomes. However, their successful adoption necessitates customized implementation strategies that address the construction industry's unique operational, cultural, and structural challenges. Future research could investigate context-specific PMO integration models and assess their long-term effects on construction performance, innovation, and organizational maturity.

2.9. Contextual Challenges in the Ethiopian Construction Sector

A key challenge facing the Ethiopian construction industry is the fragmentation of project delivery systems. Public construction projects frequently involve a diverse group of stakeholders, such as regulatory agencies, contractors, consultants, and donors, who work with little integration and coordination. This fragmented landscape contributes to miscommunication, conflicting interests, and inadequate oversight, all of which have a negative impact on project performance (Desalegn & Mahesh, 2020a). This problem is exacerbated by a lack of standardized project management

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

practices and cohesive monitoring mechanisms, which make it difficult to implement consistent project controls and quality benchmarks.

Governance and regulatory inefficiencies further exacerbate the sector's challenges. Bureaucratic delays, limited institutional accountability, and inconsistent regulatory enforcement all impede effective project planning and execution (Desalegn & Mahesh, 2020a). Although the Construction Industry Development (CID) policy was introduced to professionalize and modernize the sector, its impact has been limited due to a lack of institutional coordination, weak enforcement, and low stakeholder engagement (Desalegn & Mahesh, 2020a; FDRE, 2013; MUDC, 2013). Corruption in procurement and contract administration processes distort market operations and erode public trust in infrastructure delivery institutions (Plummer, 2012).

Professional capacity limitations represent another structural bottleneck. The sector is short of skilled project management professionals, and there is a lack of structured training and certification programs. Many practitioners rely on experiential knowledge in the absence of formal project management standards and tools (Bezawork & Bantayehu, 2020). This capacity gap leads to project delays, cost overruns, and quality deficiencies (Desalegn & Mahesh, 2020a). Furthermore, insufficient documentation and knowledge retention practices lead to repeated errors, missed learning opportunities, and a lack of organizational memory (Bezawork & Bantayehu, 2020).

In general, multiple studies emphasize that the persistent challenges facing Ethiopia's construction sector are not solely the result of technical execution failures but are deeply rooted in broader institutional, policy, and governance deficiencies. Desalegn & Mahesh (2020b) identified 27 critical performance gaps in Ethiopia's construction management ecosystem, grouped into categories such as project planning, risk management, organizational governance, and contract administration. These gaps reflect broader structural issues, including poor scheduling discipline, fragmented internal coordination, and limited executive commitment to project control mechanisms.

In addition, the lack of structured benchmarking systems and performance evaluation frameworks makes it difficult for organizations to assess outcomes, implement corrective actions, and

institutionalize continuous improvement—challenges commonly observed in other developing countries as well (Ofori, 2015).

In response to these multifaceted challenges, there has been a growing shift toward adopting project management offices (PMOs) in Ethiopia's public construction sector. Globally, PMOs are recognized as strategic organizational units responsible for standardizing project methodologies, aligning initiatives with institutional goals, and facilitating knowledge transfer and performance monitoring (Hill, 2004; PMI, 2013; Rad & Levin, 2002).

When properly empowered, PMOs can serve as catalysts for the transition from fragmented and ad hoc project delivery to integrated, repeatable, and strategically aligned project management practices (Dai & Wells, 2004; Solomon et al., 2006). However, in Ethiopia, PMO adoption has been inconsistent and frequently hindered by a lack of institutional frameworks, standardized methodologies, and skilled personnel. As such, the potential of PMOs to reform project governance and drive systemic improvements remains largely untapped.

In conclusion, while Ethiopia's construction sector has significant potential for advancing national development goals, its effectiveness is limited by systemic institutional weaknesses, professional capacity gaps, and fragmented project management practices. Addressing these barriers will necessitate not only regulatory reforms and capacity development but also a concerted effort to institutionalize structured project governance frameworks such as project management offices. When properly supported and aligned with broader development policies, PMOs have the potential to transform the construction sector by improving accountability, efficiency, and innovation.

2.10. PMO Framework in the Construction Industry

Implementing a project management office (PMO) in the construction industry is critical for enhancing project efficiency and aligning construction activities with strategic organizational goals. A structured PMO framework is critical for driving strategic and tactical decision-making in construction firms (Al Khoori & Abdul Hamid, 2022).

This framework consists of two main stages: analysis and implementation. The analysis stage involves planning to ensure that the PMO's objectives are aligned with the organization's overall vision, as well as outlining initial execution steps. This stage is critical for laying the groundwork,

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

establishing clear goals, and ensuring that the appropriate resources and stakeholders are identified and involved. The implementation stage entails carrying out the plan, monitoring progress, closing the project, and conducting a post-implementation review. The review process is critical for maintaining continuous improvement and fine-tuning the PMO's future operations.

An effective PMO is built around six key success criteria: flexibility, stakeholder politics and resistance to change, alignment and accountability, effective leadership and team management, efficient resource utilization, and risk management (Al Khoori & Abdul Hamid, 2022). Flexibility is essential, especially in the construction industry, where project parameters frequently change due to unforeseen events such as regulatory changes or supply chain disruptions. Without the ability to adapt, PMOs may struggle to manage these challenges effectively. Stakeholder politics and resistance to change are also significant barriers to successful PMO implementation, as the construction industry is frequently characterized by deeply entrenched culture and complex power dynamics. Overcoming these barriers requires strong leadership advocacy and a clear demonstration of the PMO's value.

Alignment and accountability are critical for ensuring that all stakeholders work toward the same project goals, with well-defined roles and responsibilities. This helps prevent scope creep and miscommunication, both of which are common issues in construction projects. Effective leadership and team management are necessary for guiding the PMO's operations, ensuring that the right skills are in place, and making strategic decisions that keep the project on track.

Efficient resource utilization is another critical component of PMO success, particularly given the high costs and resource constraints that construction projects frequently face. Optimizing labor, material, and financial resources can significantly reduce waste while also improving project performance. Finally, risk management is integral to the PMO's function, particularly given the numerous uncertainties present in construction projects, such as delays, cost overruns, and unforeseen site conditions. A robust risk management framework ensures that potential issues are identified early and mitigated proactively.

In conclusion, the PMO framework proposed by Al Khoori & Abdul Hamid (2022) offers a comprehensive and systematic approach to enhancing project management within the construction

industry. By focusing on both strategic alignment and operational execution, the framework addresses the key challenges faced by the construction sector, such as resource constraints, stakeholder misalignment, and risk exposure. A PMO, when properly implemented, can improve project outcomes, increase efficiency, and contribute to the long-term success of construction organizations. However, the successful establishment and operation of a PMO is dependent on overcoming institutional resistance, cultivating a collaborative culture, and ensuring the availability of necessary skills and resources.

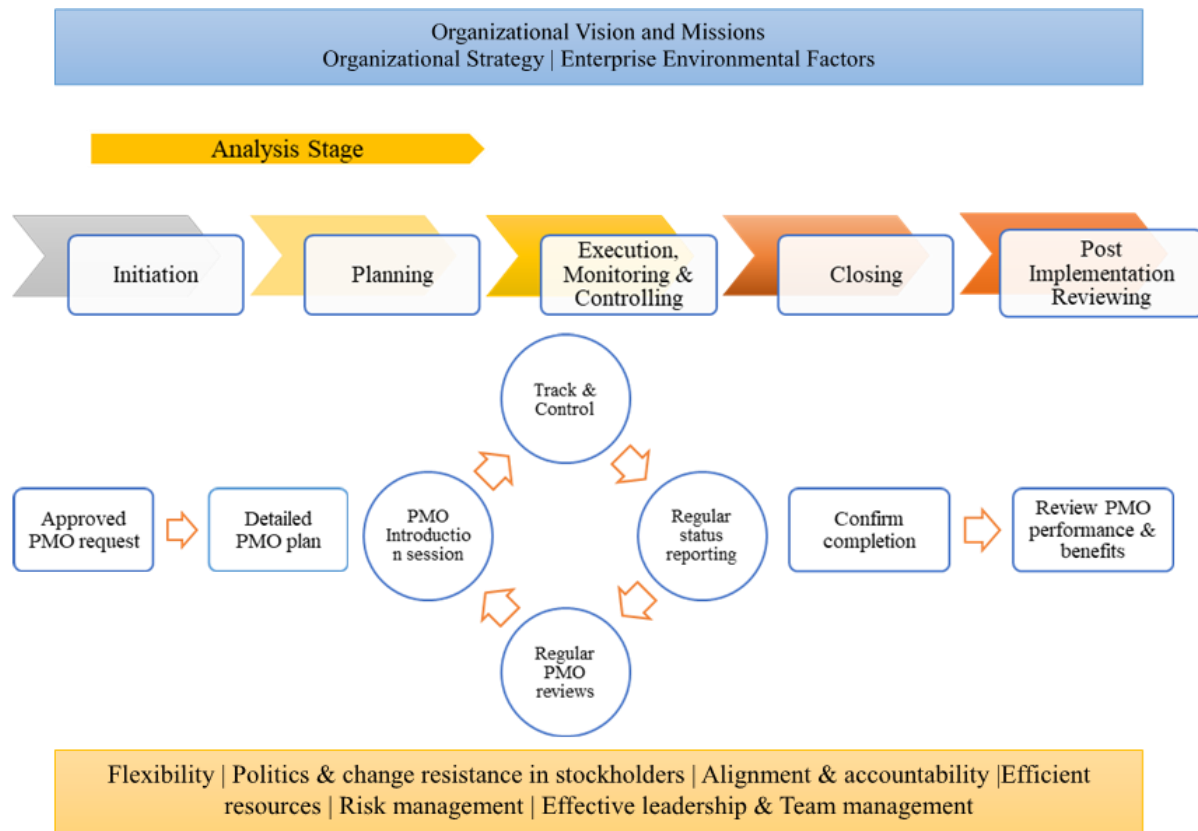


Figure 2.6: Proposed PMO conceptual framework for project-based organization⁶

2.11. Benchmarking PMO Practices against Global Standards, Frameworks, and Best Practices: ‘accepted practices’

Project management offices (PMOs) play a vital role in institutionalizing project governance, optimizing delivery efficiency, and aligning project execution with organizational strategies. Their

⁶ Proposed PMO conceptual framework for project-based organization according to Al Khoori & Hamid (2022)

effectiveness is significantly enhanced when aligned with globally recognized standards and best practices (Aubry et al., 2012; Varajão et al., 2024). This section explores and discusses how PMOs interact with global frameworks such as the PMBOK Guide, P3O (Portfolio, Programme, and Project Offices) Framework, ISO standards, and Agile methodologies and highlights the relevance of benchmarking these practices within the context of Ethiopian public construction sector.

Governance and strategic alignment

Robust governance structures are foundational to effective project management. The PMBOK Guide (PMI, 2021) outlines key governance principles such as stakeholder engagement, project charters, and strategic oversight to ensure project outcomes are consistent with broader institutional goals. The P3O Framework (Axelos, 2013) supplements this by providing a resilient structure for maintaining consistency and oversight during organizational changes.

These principles are particularly important for Ethiopian public construction sector, where leadership turnover and procedural inconsistencies can hinder project performance. Similarly, ISO 21502 establishes a comprehensive governance standard that encourages interdepartmental collaboration, procedural standardization, and performance monitoring (ISO, 2020).

Capacity building and competency development

The effectiveness of PMOs is heavily dependent on the competence of their personnel. The PMI Talent Triangle (PMI, 2022) emphasizes the development of technical, leadership, and strategic skills in a balanced manner, emphasizing the importance of structured competency frameworks.

In the Ethiopian context, the ECPMI emphasizes the project team's competency in construction project management knowledge areas as well as construction technology-related competencies, practices, and regulations (ECPMI, 2019). The Portfolio, Program and Project Management Maturity Model (P3M3 Maturity Model) further promotes continuous professional development and structured skills assessments, enabling PMOs to progress in organizational maturity (Axelos, 2016). General industry best practices also recommend allocating 5-10% of PMO budgets to ongoing training and capacity development, which can be critical in addressing skill gaps and ensuring adaptability in a rapidly changing project environment.

Operational efficiency and process optimization

Operational efficiency remains a top priority for PMOs, particularly in resource-constrained public institutions. Global standards such as ISO 21502 advocate for the adoption of streamlined project management processes and integrated performance metrics (ISO, 2020). Benchmarking against such frameworks can assist Ethiopian PMOs identify inefficiencies, optimize workflows, and increase productivity.

The integration of agile methodologies, as recommended in the PMBOK Guide, supports iterative planning and rapid response to evolving project needs (PMI, 2021). In complex environments, such as Ethiopia's public construction sector, incorporating agile principles allows PMOs to maintain flexibility while also encouraging stronger stakeholder engagement.

Risk management and resilience

Effective risk governance is a core responsibility of PMOs, particularly in dynamic and uncertain environments. The ISO 31000 risk management framework outlines a systematic approach to risk identification, analysis, and mitigation throughout the project lifecycle (ISO, 2018). Incorporating this framework into PMO operations ensures proactive risk management strategies that improve project resilience.

Furthermore, the PMBOK Guide and PRINCE2 methodology emphasize the importance of stakeholder communication and transparency in risk management (Axelos, 2015; PMI, 2021). Benchmarking the local PMOs against these frameworks allows institutions to improve their uncertainty management and project continuity capabilities.

Benchmarking PMO practices in Ethiopian public construction sector against global standards serves as a catalyst for institutional reform and improved project performance. In an environment marked by skill gaps, inconsistent processes, and poor risk management, aligning with international benchmarks promotes knowledge transfer, strengthens institutional credibility, and drives accountability. Ethiopian public construction organizations can improve their PMO maturity, streamline project delivery, and better align with national development priorities by implementing global best practices in governance, training, and risk mitigation.

In conclusion, benchmarking of PMO practices with global standards and frameworks such as PMBOK, P3O, ISO, and Agile methodologies is essential to fostering strategic alignment, operational efficiency, and risk resilience. Adopting these global benchmarks offers Ethiopian public construction organizations a viable path to institutional capacity development, improved governance, and improved project delivery outcomes. This alignment not only strengthens internal PMO functions, but it also makes a significant contribution to the wider public sector's modernization and sustainable development efforts.

2.12. Literature Gaps and Rationale for the Study

While project management offices (PMOs) have received increased attention in global studies, significant gaps exist in their application, effectiveness, and contextual adaptation in Ethiopia's public construction sector. The majority of existing literature has largely focused on general project management challenges—such as systemic inefficiencies, cost overruns, and schedule delays—with limited empirical evidence on PMO practices—structures, operational models, and strategic roles—in the Ethiopian construction sector (Bezawork & Bantayehu, 2020; Desalegn & Mahesh, 2020a).

One significant gap is the lack of empirical research on PMO practices in Ethiopia—neither studied nor documented. Although PMO models and maturity frameworks have been well established in developed economies, their contextualization for developing countries remains underexplored. This disparity necessitates a deliberate adaptation of global PMO standards—such as those outlined by PMBOK, ISO 21502, and the P3O framework—to Ethiopia's institutional realities, resource constraints, and governance environments (Aubry et al., 2008; PMI, 2021; Varajão et al., 2024). Benchmarking against these global frameworks provides an opportunity for public institutions to improve institutional credibility, drive accountability, and align project management practices with national development goals.

Additionally, the literature does not sufficiently explore how PMOs are structured or function across different organizational types within Ethiopia. While PMO-like practices may exist, they are often informal and lack documentation or systematic evaluation. It is difficult to assess the maturity or effectiveness of PMOs without a clear understanding of their structures, mandates, and

governance models (Dai & Wells, 2004). Understanding these dynamics is critical, particularly given the sector's persistent governance fragmentation and lack of integration between strategic planning and project execution (Desalegn & Mahesh, 2020a).

The impact of PMOs on project success is another area that has received little attention. A lot of local research prioritizes immediate project outcomes (timeliness, budget adherence and expected quality) over broader project success indicators such as stakeholder satisfaction, knowledge retention, and strategic alignment. Bryde & Robinson (2005) and Rad & Levin (2002) argue that a more comprehensive understanding of PMO performance must include not only operational efficiency but also long-term value delivery and institutional learning.

Furthermore, the literature lacks comparative analysis between PMOs in project-based and non-project-based organizations within Ethiopia's public sector. Such comparisons are essential for capturing diverse operational environments, identifying adaptable best practices, and generating insights that can inform sector-wide reforms (Aubry et al., 2008).

In light of these gaps, the purpose of this study is to investigate project management offices' (PMOs) practices—their structural and functional realities in selected Ethiopian public building construction organizations—in order to assess their strategic alignment and role in project performance. The study seeks to contribute to the growing body of PMO literature by providing context-specific insights and evidence-based recommendations, as well as to inform policy formulation and institutional capacity building in Ethiopia's construction sector.

2.13. Conceptual Framework of the Study

The conceptual framework developed for this study is an important analytical tool for exploring the various aspects of project management office (PMO) practices in Ethiopia's public construction sector. It combines governance theories, international standards such as PMBOK (PMI, 2021), ISO 21502 (ISO, 2020), and the P3O Framework (Axelos, 2013), and best practices to identify key variables that influence PMO functionality, institutional maturity, and project performance. This framework not only guides empirical research, but it also enables practical evaluation of how PMOs contribute to strategic alignment and organizational effectiveness in the public sector.

A. Foundational inputs and institutional drivers

Governance and structural integration: the governance structure of PMOs is central to the framework, as it determines their strategic influence and operational reach. Enterprise-level governance models enable PMOs to align project portfolios with organizational and national goals, whereas departmental silo-based PMOs frequently struggle with authority and integration (Too & Weaver, 2014). Establishing a governance structure that encourages horizontal and vertical coordination is therefore essential for effective resource allocation and strategic coherence.

Staffing and capacity development: human capital is a central determinant of PMO success. According to the PMI Talent Triangle (PMI, 2022), PMO personnel should have a balanced mix of technical, leadership, and strategic skills. Overreliance on experience-based hiring—without formal certifications such as PMP or PMO-CP—has been linked to inconsistent performance and limited methodological rigor (Müller & Turner, 2007). Competency-based recruitment and continuous training programs are thus essential for enhancing agility and aligning staff competencies with global standards.

Stakeholder engagement: effective stakeholder engagement is essential for project success, particularly in complex, multi-agency public sector projects. This stakeholder theory-based component emphasizes the importance of inclusive communication, shared goal setting, and collaborative governance (PMI, 2021). Inadequate stakeholder involvement frequently leads to misaligned expectations and delays, reducing the likelihood of project success (Aubry, 2011).

Resource and risk management systems: resource availability and risk preparedness are equally important to PMO performance. A lack of digital infrastructure, insufficient funding, and inadequate risk management frameworks frequently impede project execution (ISO, 2018; Zwikael & Globerson, 2006). Integrating resource planning and risk management into PMO processes helps to maintain timelines, budgets, and quality outcomes.

Knowledge management and institutional learning: knowledge management mechanisms, such as project reviews and lessons-learned repositories, are critical for promoting organizational learning. In Ethiopia, the lack of structured documentation and knowledge-sharing systems contributes to recurring project failures (Bezawork & Bantayehu, 2020). Institutionalizing learning

processes not only eliminates redundancy, but it also promotes innovation and continuous improvement.

B. PMO operational mechanisms

Strategic alignment: ensures that projects are not completed in isolation but rather contribute meaningfully to organizational goals and national development priorities. It also facilitates executive sponsorship, which enhances PMO legitimacy and visibility. Executive sponsorship is pivotal in enhancing PMO legitimacy and visibility, as active and informed sponsors significantly contribute to the sustainability and success of project management practices (Chandler & Thomas, 2015; Cooke-Davies, 2005). PMOs with strong strategic linkages are better positioned to shape organizational direction and influence resource allocation.

Operational excellence: is defined by efficiency, consistency, and the ability to deliver projects on time, within budget, and to expected quality standards. This necessitates well-defined processes, performance tracking tools, and integrated coordination mechanisms (ISO, 2020; PMI, 2021). High-performing PMOs embed these mechanisms to create disciplined, repeatable practices that ensure reliable outcomes.

Continuous improvement and feedback loops: integrated into PMO operations promotes adaptability and long-term relevance. PMOs can identify process bottlenecks and incorporate lessons learned from previous projects through mechanisms such as post-implementation reviews (Turner & Zolin, 2012). This cyclical learning process demonstrates maturity in the PMO and reinforces institutional responsiveness to change.

C. Project outcomes and PMO effectiveness

Project success: traditional project success metrics, such as time, cost, and scope, are increasingly perceived as inadequate. Contemporary literature advocates for a broader definition that includes stakeholder satisfaction, strategic alignment, and contribution to public value (Atkinson, 1999; Serrador & Turner, 2015). Successful public infrastructure projects must demonstrate operational efficiency as well as policy alignment.

PMO institutional effectiveness: beyond individual project performance, PMO effectiveness is measured by how much it contributes to organizational transformation. A mature PMO drives

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

institutional reforms, ensures accountability, facilitates policy implementation, and aligns portfolios with long-term development goals (Aubry et al., 2012). As a result, PMOs are strategic entities capable of influencing both project- and system-wide outcomes.

In conclusion, this conceptual framework provides a comprehensive framework for investigating PMO practices in Ethiopia's public construction sector. It provides a comprehensive view of how PMOs can contribute to project success and institutional effectiveness by outlining foundational inputs, operational mechanisms, and outcomes. The framework, which is based on international standards and scholarly literature, can be used as both an analytical tool for research and a practical guide for public sector policy and organizational reform.

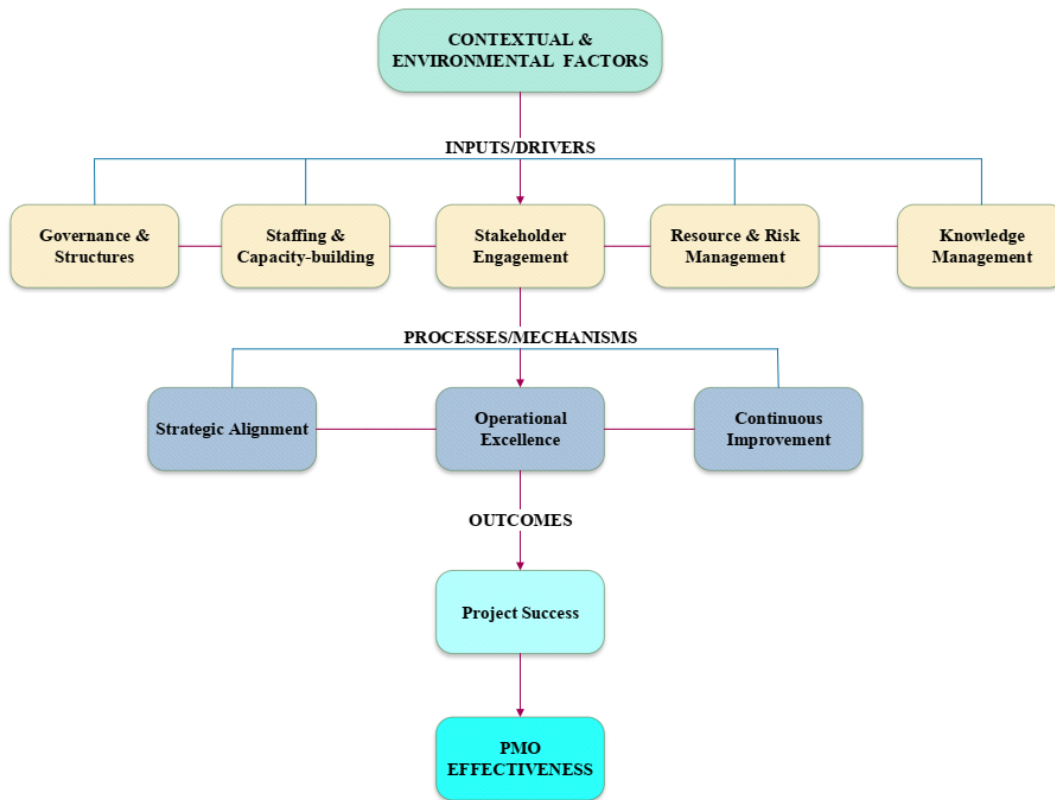


Figure 2.7: Conceptual framework of the study

CHAPTER THREE

3. METHODOLOGY

3.1. Introduction

Tayie (2005) defines research as a systematic and purposeful endeavor to investigate specific issues, seek answers to defined questions, or explore existing practices within a particular context. To produce credible and meaningful results, research must be based on a consistent methodology—a structured set of techniques and procedures that guide the inquiry and lead to valid conclusions (Easterby-Smith et al., 2012). The research design is central to this process, serving as a logical blueprint connecting the research questions to data collection methods, analysis procedures, and study conclusions (Yin, 2009). The research design ensures consistency, coherence, and methodological rigor throughout the investigation by defining the sequential steps from problem identification to evidence-based interpretation.

Building on the research problem formulated in Chapter One and the literature reviewed in Chapter Two, this Chapter discusses the study's research methodology in depth. The Chapter begins by describing the methodological approach used, justifying its suitability for achieving the research objectives. It then discusses the data collection and analysis techniques used to generate and interpret empirical evidence. Lastly, it presents the quality assurance strategies implemented to ensure the reliability, validity, and overall integrity of the research process and conclusions.

3.2. The Role of Preliminary Study in Research Design

A preliminary exploratory study was conducted across four public organizations: Mega Projects Construction Office (MPCO), Commercial Bank of Ethiopia (CBE), Ethiopian Electric Utility (EEU), and Ethio Telecom. The purpose of this exploratory phase was to gain preliminary insights into institutional realities, organizational diversity, and practical challenges associated with PMO practices in Ethiopia's public construction sector. These insights informed the formulation of the research problem and the development of instruments that were appropriate for the context.

The preliminary exploration involved informal interviews with PMO personnel, reviews of internal archives, and organizational profiling. Unstructured conversations with mid-level professionals provided detailed insights into institutional dynamics, operational challenges, and

emerging themes that more formal, structured interviews may have overlooked. This method is frequently used in qualitative case study research, especially when the goal is to inform research design rather than collect analyzable data (Tisdell et al., 2025; Yin, 2018). The ethical standards were upheld by obtaining verbal consent, which was reasonable given that the conversations were not for formal data analysis or quotation.

The preliminary phase's thematic insights revealed significant variability in PMO maturity, governance integration, staffing models, and institutional roles. Common issues, such as a lack of standardized methodologies, capacity gaps, low stakeholder engagement, and insufficient risk management, highlighted the need for instruments tailored to context-specific operational environments. These findings established the analytical foundation for the study's conceptual framework, ensuring that observed institutional realities aligned with globally accepted PMO dimensions.

Moreover, the observed structural differences, particularly between project-based and non-project-based organizations, informed the selection of case study organizations. This informed the decision to employ a multiple-case study design with both literal and theoretical replication logic, in accordance with Yin's (2009) methodology. It also enhanced the construct validity of the research instruments by ensuring that they captured relevant, context-specific aspects of PMO practices. In summary, the preliminary study played a foundational role in shaping the main research design by:

- Identifying key thematic dimensions relevant to PMO practices.
- Informing the structure and content of interview and survey instruments.
- Guiding the selection of case study organizations.
- Supporting the use of qualitative mixed methods and multiple case studies.

This integrative process ensured that the final research design was both theory-informed and contextualized to the Ethiopian public sector's complexities.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

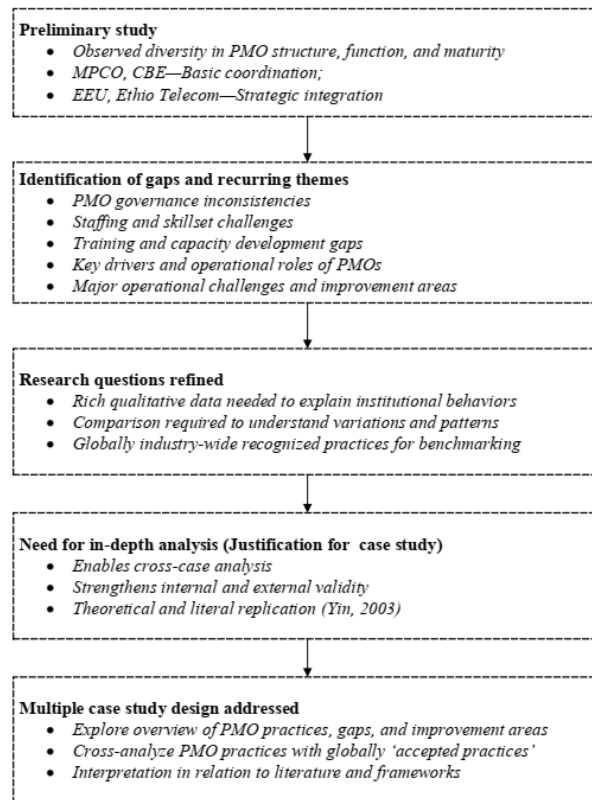


Figure 3.1: Linking preliminary study findings to case study design

3.3 Research Type, Strategy, and Analytical Approach

This study employs a qualitative-dominant mixed-methods strategy, incorporating exploratory, descriptive, and explanatory research approaches to systematically investigate project management office (PMO) practices in Ethiopia's public building construction sector. This methodological approach enables a nuanced understanding of institutional realities while balancing empirical depth and theoretical relevance.

The exploratory component addresses a significant gap in the literature on PMO practices in the Ethiopian construction industry. Given that many institutional practices, particularly in developing countries, are informal and undocumented, exploratory research is used to identify key themes, contextual dynamics, and organizational variables (Stebbins, 2001). Preliminary findings revealed recurring themes in PMO practices, including governance structures, staffing arrangements, capacity-building initiatives, primary roles, and operational modes within public sector

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

organizations. These insights informed both the analytical framework and the design of subsequent data collection tools.

The descriptive phase builds on these exploratory findings by documenting PMO practices in three strategically selected public organizations: one project-based (the Mega Projects Construction Office, MPCO) and two with embedded PMOs within broader operational institutions (the Commercial Bank of Ethiopia, CBE, and the Ethiopian Electric Utility, EEU). This phase captures both formal arrangements and practice-level variations in areas such as PMO structures, governance models, staffing configurations, capacity-building mechanisms, and operational challenges. Data were gathered through semi-structured interviews and document reviews, with descriptive statistics from structured surveys supplementing the findings. This mixed approach enhances the reliability and robustness of the analysis through methodological triangulation.

In addition to exploring and describing PMO practices, this study undertakes an explanatory analysis to identify and interpret the institutional and operational factors influencing PMO effectiveness. Drawing from empirical evidence (interviews, surveys, and document reviews) and the conceptual framework developed in Chapter Two, this phase investigates how contextual and organizational dynamics—such as governance systems, staff competency, stakeholder engagement, risk management, and knowledge management practices—shape PMO performance. Moreover, external constraints, including regulatory complexity, fragmented oversight, and unstable institutional leadership, are examined for their implications on strategic alignment and implementation success. These challenges are particularly pressing in Ethiopia's public construction context, which is characterized by institutional transitions, overlapping mandates, and resource constraints.

Qualitative data analysis was guided by Braun and Clarke's six-phase process for reflexive thematic analysis (RTA) (Braun & Clarke, 2006; Byrne, 2022). This structured but flexible approach supports rigorous identification and interpretation of patterns within qualitative data. In the first phase, the researcher engaged in repeated reading of transcripts and documents to familiarize themselves with the content and develop a nuanced understanding. The second phase involved generating initial codes by labeling data segments relevant to the research questions. In

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

the third phase, these codes were organized into broader thematic categories that reflected interconnections within the dataset. In the fourth phase, themes were reviewed and refined to ensure internal consistency and alignment with research objectives. During the fifth phase, each theme was clearly defined and named, articulating its unique contribution to the narrative. The final phase involved synthesizing these themes into a coherent report, integrating empirical findings with the theoretical constructs outlined in earlier chapters. This procedure ensured that the analysis remained grounded, contextually relevant, and theoretically informed.

In addition to RTA, content analysis—defined by Bowen (2009) as the systematic organization of information into categories relevant to the research questions—was used to examine organizational documents such as PMO mandates, staffing plans, internal reports, and policy guidelines. Content analysis enhanced the RTA by allowing for the systematic categorization of formal records. While initial coding categories were deduced from the conceptual framework and preliminary findings, they were iteratively refined as emergent patterns emerged in the data. This combination of theory-driven and emergent analysis strategies allowed for analytical flexibility as well as conceptual coherence.

In conclusion, the integration of exploratory inquiry, descriptive documentation, and explanatory interpretation—supported by reflexive thematic analysis and content analysis—enabled a thorough and context-specific investigation of PMO practices in the public construction sector. Methodological triangulation enhanced the empirical validity and practical relevance of the findings. Consequently, the study offers a strong theoretical and empirical foundation for improving institutional performance and governance in public sector project management.

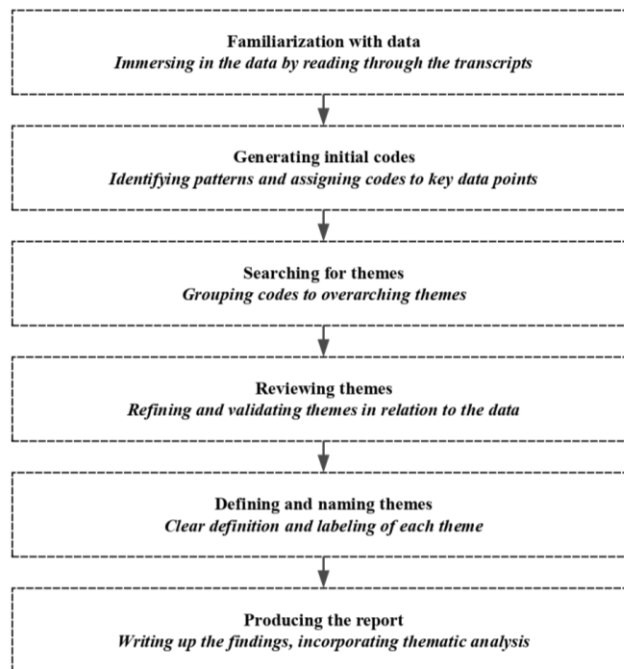


Figure 3.2: Thematic analysis framework⁷

3.4. Justification of the Methodology Used: Selection of the Research Method

This study adopts a case study research design to systematically explore the practices of project management offices (PMOs) within the selected public construction sector. A well-structured design ensures that the evidence gathered corresponds to the research questions while maintaining methodological rigor and logical coherence. This research design facilitates the establishment of clear links between the research objectives, empirical data gathered, and conclusions drawn.

This research design is guided by five fundamental elements, as informed by Yin (2009) case study framework: the nature of the research question, the underlying proposition, the unit of analysis, the logic linking data to theory, and the criteria for interpreting findings.

a) The nature of question of the study

The research questions driving this study are both descriptive and explanatory in nature, aiming to investigate how PMOs are structured, staffed, and operated, as well as how they align with global

⁷ Thematic analysis framework adapted from Braun & Clarke (2006)

best practices and frameworks. A case study approach is particularly well suited to answering these questions because it allows for in-depth, context-specific exploration of organizational processes and real-life phenomena that are difficult to isolate using other research strategies. This methodological choice allows the study to maintain the holistic characteristics of PMOs within their operational environments, addressing the complexities and contextual influences that shape their effectiveness.

b) Theory (proposition) of the study

The central proposition of this study is that the effectiveness of project management offices (PMOs) is significantly shaped by the interaction between institutional input factors (driving forces) and organizational processes (implementation mechanisms). Specifically, the study posits that PMO performance outcomes are influenced by how well governance structures, staffing capabilities, stakeholder engagement, risk management systems, and knowledge management functions (inputs) are integrated into strategic and operational mechanisms (process)—namely strategic alignment, operational efficiency, and continuous improvement. The relationship between these input and process factors is hypothesized to be moderated by contextual environmental factors, such as regulatory fragmentation, leadership instability, and institutional complexity.

This proposition directs the study's analytical focus toward identifying the most important organizational and institutional variables that influence PMO success. It also assists in defining the study's scope by directing the development of research questions, case study units, and thematic categories for data collection and analysis.

c) Unit of analysis

The unit of analysis for this study is the PMO entity within each selected organization. Three organizations were purposefully selected to represent diverse institutional settings: the Mega Projects Construction Office (MPCO), a project-based organization, and two non-project-based organizations, the Commercial Bank of Ethiopia (CBE) and the Ethiopian Electric Utility (EEU), both of which have integrated PMOs to manage large-scale construction projects. These cases were selected not only for their relevance but also for their potential to provide comparative insights into how PMOs operate across different organizational contexts in the public sector.

d) *Linking data to theory*

To link empirical data to the underlying proposition, the study employs pattern matching Campbell (1975) as its primary analytic logic. Specifically, the observed practices of PMOs in the selected case study organizations are compared against theoretical expectations and globally '*accepted practices*'. The analysis focuses on determining whether factors such as strategic alignment, robust governance structures, and effective capacity-building initiatives correlate with improved project outcomes. This approach either affirms or challenges the central research proposition.

e) *Criteria for interpreting findings*

To improve interpretive rigor, the study employs a comparative benchmarking strategy, comparing each organization's PMO practices to globally '*accepted practices*'. This method simplifies the classification of PMO maturity and effectiveness by identifying convergences (practices that align with '*accepted practice*'), divergences (context-specific adaptations or deficiencies), and areas for improvement.

To summarize, by combining descriptive depth with theoretical foundation and comparative analysis, this case study design provides a rigorous framework for investigating PMO practices in a nuanced and contextually rich manner. This layered analytical approach strengthens the research propositions and generates actionable recommendations for improving PMO practices in Ethiopia's public construction sector.

3.5. Selection of the Case

This study employs a comparative multiple-case study design to systematically investigate the practices of project management offices (PMOs) in various institutional contexts within the public construction sector. To capture meaningful variation in PMO practices, the study includes both project-based organizations (PBOs) and non-project-based organizations (non-PBOs). This comparative design is methodologically significant because it allows for an investigation into how different organizational settings affect institutional integration, strategic alignment, and operational autonomy in PMOs. While PBOs typically embed project management as a core organizational function, with dedicated governance and delivery structures, non-PBOs frequently incorporate PMOs as supportive or strategic units within larger bureaucratic or service-driven

mandates (ECPMI, 2019). This distinction enables extensive comparative analysis, especially when comparing institutional integration, strategic alignment, and resource autonomy.

Case selection strategy and rationale

To ensure analytical depth and contextual relevance, a purposive sampling strategy was employed, guided by a set of clearly defined inclusion criteria (Kuzel, 1992). First, selected organizations had to be directly involved in public building construction projects, which aligned with the study's sectoral focus. Second, a formally established PMO unit with oversight responsibilities for the entire project lifecycle (planning, execution, and monitoring) was required. Third, access to knowledgeable personnel (key informants), such as senior managers, team leaders, and technical specialists, was critical for conducting in-depth qualitative interviews and structured surveys. Finally, the selection aimed to balance organizational diversity by ensuring representation of both PBOs and non-PBOs with varying degrees of PMO maturity, integration, and strategic positioning.

Based on these criteria, three public institutions were selected for case study analysis. The Mega Projects Construction Office (MPCO) is a typical project-based organization, with a sole focus on managing large-scale public construction projects. In contrast, non-project-based organizations such as the Commercial Bank of Ethiopia (CBE) and the Ethiopian Electric Utility (EEU) have embedded PMOs to manage construction projects as part of larger institutional mandates.

Ethio Telecom was considered a potential case during the selection process, but was ultimately excluded due to its limited involvement in public building construction, which violates selection criteria number one. Furthermore, its PMO structure was very similar to that of EEU, both in terms of functional maturity and strategic orientation, and its inclusion would have most likely resulted in redundant data without providing significant new analytical insights.

In conclusion, the study's inclusion of organizational diversity PMOs ensures a methodologically coherent and analytically productive sample capable of producing context-specific findings and informing evidence-based recommendations for improving PMO performance in the public construction sector.

Multiple case design and replication logic

This study applies replication logic, rather than traditional sampling logic, to select and analyze the case organizations. Unlike sampling logic, which emphasizes statistical representativeness, replication logic promotes the theoretical generalization of findings by selecting cases that confirm similar patterns under similar conditions (literal replication) or highlight differences under theoretically distinct conditions (theoretical replication). Following Yin (2009) framework, it employs literal replication to validate recurring patterns across similar cases, specifically between the Mega Projects Construction Office (MPCO) and the Ethiopian Electric Utility (EEU), both of which manage large-scale public infrastructure projects and face similar operational challenges.

In contrast, theoretical replication is employed between MPCO and the Commercial Bank of Ethiopia (CBE) to explore how organizational structure differences—project-based (PBO) versus non-project-based (non-PBO)—influence overall PMO practices. While EEU and CBE are both non-PBOs, their sectoral divergence makes them unsuitable for direct comparison. This dual replication strategy strengthens the study's validity, depth, and generalizability, allowing for a thorough comparative analysis of PMO practices across the public construction sector.

Furthermore, the multiple-case study design incorporates embedded units of analysis to study key aspects of PMO practices within each organization, such as structure and governance, staffing, capacity building, and primary roles. This method enables a multi-layered investigation that captures both individual case characteristics and cross-case patterns, enhancing the assessment of PMO practices in the public construction sector.

3.6. Method of Data Collection Adopted

To achieve the study's primary objective of exploring and assessing the overall practices and effectiveness of project management offices (PMOs) in the public construction sector, a triangulated data collection strategy was employed. This approach enhanced credibility, reliability, and contextual richness, ensuring methodological rigor. It aligns with Yin's (2009) recommendation that case study research must employ multiple sources of evidence to strengthen construct validity and enhance the robustness of case-based findings.

To provide a comprehensive understanding of PMO practices, three complementary data collection methods were used: document review, semi-structured interviews, and structured surveys/questionnaires. Each of these methods served a unique purpose in the overall design while also allowing for cross-validation of findings through methodological triangulation.

Document reviews

Document review was used to gain a basic understanding of the formal structures, governance frameworks, and institutional mandates that influence PMO operations. This included a systematic review of available organizational charts, strategic plans, regulatory proclamations, and policy bulletins. Despite the initial plan to conduct a comprehensive institutional document review, limited access to internal operational documents limited the scope of this method. Nonetheless, the documents that were accessible and available provided valuable information about PMO positioning, structural hierarchies, and legal and strategic alignment, which served as the basis for contextual interpretation and cross-referencing during interviews and surveys.

Semi-structured interviews

To supplement the limited availability of data for document review and deepen understanding of contextual realities, semi-structured interviews were conducted with strategically chosen key informants. Participants in the interviews included directors, team leaders, senior managers, and technical professionals, who were chosen based on their institutional roles, depth of experience, and proximity to PMO operations (Stavros & Westberg, 2009). The semi-structured format keeps a balance between consistency and flexibility, allowing the interviewer to follow a predesigned interview guide while also adapting to organization-specific issues that arise during the discussion.

This method provided in-depth, qualitative insights into the governance mechanisms, staffing dynamics, training strategies, and operational challenges of PMOs. While face-to-face interviews are inherently subjective due to interviewer bias and response bias (Patton, 1987), these were mitigated by triangulation, response corroboration, and parallel interviews across hierarchies. Another issue, the disclosure of sensitive information, was addressed through response anonymity, cross-checking mechanisms, and validation against survey and document data.

Table 3.1: Summary of key informants (interviewee) from the case study organizations

<i>Organization</i>	<i>Member</i>	<i>Quantity</i>
<i>EEU</i>	PMO Manager/Staff (3) Functional Manager (1) Administrative (1)	5
<i>CBE</i>	PMO Manager/Staff (5) Functional Manager (2) Administrative (1)	8
<i>MPCO</i>	PMO Manager/Staff (5) Functional Manager (2) Administrative (1)	8
	Total	21

Structured surveys

Structured surveys were administered across the three organizations under study to supplement qualitative findings and provide empirical validation. The survey instrument was designed based on preliminary study’s findings and thematic areas identified in the literature review. The survey employed a mix of Likert-scale items, multiple-choice questions, and open-ended questions, allowing respondents to rate standardized metrics while also expressing contextual perspectives. To ensure that the data reflected firsthand organizational experiences, target respondents were drawn from departments and units directly involved in project oversight, planning, and PMO operations.

The supplementary survey was distributed and administered via Google Forms for their ease of use, accessibility and free availability (Vasanth Raju & Harinarayana, 2016) . Despite the low response rate of online surveys, this method was found to be effective in gathering comprehensive insights from professionals who work closely with PMOs or POs on a daily basis.

In conclusion, to enhance the analytical rigor and construct validity of the research, a methodological triangulation strategy was applied—integrating findings from document reviews, interviews, and surveys. This multiple approach facilitated a thorough and nuanced understanding

of PMO practices while also reducing the possibility of single-source bias. Additionally, triangulation allowed for the validation of emerging themes and ensured that PMO practices were interpreted consistently across the case study organizations. Moreover, the combination of data sources, analytic tools, and theoretical alignment established a methodologically sound foundation for evaluating and improving PMO practices in the public construction sector.

Table 3.2: Summary of survey respondents from the case study organizations [Distributed]

Organization	Planned PMO Staff (Employees)	Distributed (Count)	Distributed (%)
EEU	15-29	15	23.0
CBE	30-99	25	38.5
MPCO	30-99	25	38.5
Overall		65	100

3.7. Analysis and Interpretation Techniques

This section describes the analytical approach used to investigate project management office (PMO) practices in the public construction sector. It builds on the exploratory, descriptive, and explanatory research approaches described in Section 3.3. The analysis integrates data from semi-structured interviews, structured surveys, and organizational documents across three purposefully selected public institutions: the Mega Projects Construction Office (MPCO), the Commercial Bank of Ethiopia (CBE), and the Ethiopian Electric Utility (EEU).

Qualitative analysis framework

Qualitative data from interviews and document reviews were analyzed using a combination of reflexive thematic analysis (RTA) and content analysis. Document analysis followed Bowen's (2009) model of content analysis, which entails systematically organizing textual data into meaningful categories relevant to the research questions. RTA, as described by Braun & Clarke (2006), was used for interview data, providing a structured but flexible process for identifying, refining, and interpreting patterns and themes. These methods allowed for both theory-driven and emergent interpretations grounded in the realities of each case organization.

The coding framework was guided by the conceptual model developed in Chapter Two, as well as insights from preliminary study findings. This framework focused on key analytical categories such as governance structures, staffing configurations, capacity-building mechanisms, core PMO roles, and institutional performance challenges. The analytical categories were iteratively refined as new patterns and variations emerged during the coding process, as Bulmer (2017) suggested.

Structured surveys provided supplementary quantitative data that were used primarily to triangulate qualitative findings, validate emerging themes, and identify variations in PMO practices across organizations. These data were used to conduct a comparative assessment of PMO practices across key analytical categories, as well as the PMO's contribution and perceived effectiveness in project delivery.

Phased analytical approach

Following the typology of qualitative analysis suggested by Miles & Huberman (1994), the data analysis proceeded in two interrelated phases: exploration and description, and explanation and prescription.

i. Exploration and description of PMO practices

This phase addressed the study's first objective—to explore and describe the organizational and functional characteristics of PMOs in selected public institutions. The analysis involved conceptually ordered displays of key PMO dimensions, including structure, governance, staffing models, core roles, and training mechanisms. These dimensions were identified through document reviews of available and accessible documents, such as PMO mandates, strategy documents, and organizational charts, and confirmed through interviews with key informants. The use of conceptually structured displays facilitated comparison across the three cases while preserving contextual specificity. Informant feedback was incorporated during this phase to ensure that interpretations reflected organizational realities and to validate the consistency of themes.

ii. Explanation and prescription

In addition to descriptive analysis, the study conducted an explanatory assessment to identify institutional and operational factors contributing to PMO underperformance. Drawing from both empirical findings and the conceptual framework, the analysis examined how internal factors (e.g.,

unclear mandates, limited staffing capacity, and weak integration with institutional strategy) and external conditions (e.g., fragmented regulatory oversight, inconsistent leadership, and political interference) influenced PMO effectiveness.

To synthesize these factors, the study employed thematic causal mapping. Recurring challenges were grouped under the major conceptual blocks developed in Chapter Two and analyzed for their implications on project delivery outcomes. Although causal networks were primarily narrative and thematic rather than visual, this process allowed for tracing root causes of performance gaps and interdependencies across organizational systems.

Prescriptive insights were generated by cross-analyzing practices observed in case organizations to internationally recognized project governance standards, frameworks, and best practices, collectively referred to as '*accepted practices*'. These prescriptive insights were intended to serve as reference points for locally adaptable reforms in public construction sector PMOs, rather than direct transplants of global models.

In conclusion, the combined use of RTA, content analysis, and triangulated data sources enhanced the credibility, depth, and applicability of the study's findings. This multi-level analysis enabled a grounded interpretation of PMO practices while also supporting broader policy recommendations for institutional reform. The study links observed practices to theoretical constructs and globally '*accepted practices*' to provide a context-specific, evidence-based understanding of PMO performance and governance in the public construction sector.

3.8. Measures to Ascertain Research Quality

Maintaining the quality, credibility, and rigor of a research study is critical for ensuring that its findings are both valid and impactful. In this study, each stage of the research process—from methodological design and data collection to analysis and interpretation—was carefully considered in accordance with Yin's (2009) criteria for conducting high-quality case studies. The four major aspects of research quality were addressed: construct validity, internal validity, external validity, and reliability.

To establish construct validity, the study employed a triangulated data collection strategy that included document reviews, interviews, and structured surveys. This methodological triangulation

contributed to data convergence across multiple sources and strengthened the chain of evidence linking empirical observations to theoretical constructs. This enhanced the credibility of the study's findings while reducing the possibility of subjective bias.

Internal validity was addressed using methods appropriate for explanatory case study research. These included pattern matching, which compared empirical results to theoretical predictions, and explanation building, which involved developing and refining theoretical propositions to account for observed patterns. These approaches ensured logical consistency when drawing causal relationships, particularly in understanding how organizational structure, strategic alignment, and PMO maturity influenced observed outcomes.

To improve external validity, the study employed replication logic with a multiple-case design. This included selecting cases for literal replication—where similar results were expected under similar conditions—and theoretical replication, where contrasting outcomes were expected due to organizational differences. Furthermore, the study broadened the generalizability of its findings by including both project-based and non-project-based organizations, resulting in a more comprehensive understanding of PMO practices in the public construction sector.

The development and consistent implementation of a case study protocol strengthened reliability by providing a standardized guide for data collection and documentation across all three organizations. The protocol standardized data collection procedures, reducing researcher bias and enhancing the study's reproducibility.

To summarize, the systematic application of these quality assurance measures ensured that the study was methodologically rigorous and analytically sound. The use of triangulation, replication logic, and standardized protocols not only improves the validity and reliability of the research, but it also ensures that the findings are theoretically sound and practical. These measures significantly improve the study's capacity to inform PMO practices and organizational effectiveness in the public construction sector.

3.9. Case Study Protocol

A structured case study protocol was used as a guiding framework throughout the research process to ensure methodological rigor and consistency among the three case organizations selected:

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

MPCO, CBE, and EEU. Yin (2018) recommended the protocol as an important methodological tool for improving the validity, reliability, and replicability of findings across cases. It established a consistent framework for data collection and analysis, enhancing analytic comparability and reducing interpretive bias in a multiple-case study design.

The case study protocol was composed of four interlinked components. The first component, the study overview, defined the research objectives and scope, which were to explore, describe, and interpret PMO practices in the public construction sector. This section outlined the core research questions, the guiding proposition, and a conceptual framework based on global standards and best practices. It also justified the selection of the three case organizations on the basis of structural differences (project-based versus non-project-based), PMO maturity levels, and involvement in public construction projects. This overview ensured that the research orientation was clear and consistent from the beginning.

The second component outlined the data collection procedures, emphasizing both methodological integrity and ethical compliance. It outlined procedures for obtaining informed consent, maintaining participant confidentiality, and encouraging voluntary participation. Multiple sources were used to collect data, including organizational documents, semi-structured interviews, and structured surveys. The use of triangulation techniques was an important feature in ensuring cross-validation of findings and improving construct validity. These procedures were critical in preserving academic credibility and building trust with key informants at all levels of the hierarchy.

The third component was a thematic set of protocol questions designed to structure the investigation into six core domains: PMO structure and governance; staffing and competency practices; capacity-building and training initiatives; PMO drivers and functional roles; operational challenges and institutional barriers; and PMO effectiveness and improvement mechanisms. Each domain was linked to potential sources of evidence, such as organizational proclamation laws, organizational charts, and interview transcripts, allowing for more targeted investigation and robust triangulation. This structured approach ensured consistency between interviews and document reviews while still allowing for context-specific insights.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

The final component was a preliminary report outline, which provided guidelines for synthesizing and presenting case findings. It emphasized narrative integration of qualitative and quantitative data, alignment with the theoretical proposition, and adherence to document standards. This component ensured the traceability, transparency, and ethical integrity of data reporting and analysis in all three case studies.

Ultimately, establishing a formal case study protocol was critical to ensuring methodological consistency and analytical depth. It helped to bridge the gap between research design and data collection procedures (fieldwork), allowing for systematic inquiry and the development of evidence-based recommendations. The protocol significantly enhanced the study's contribution to understanding PMO practices and effectiveness in the public construction sector by facilitating transparent data handling, validating emerging themes, and benchmarking the research against internationally recognized standards and best practices.

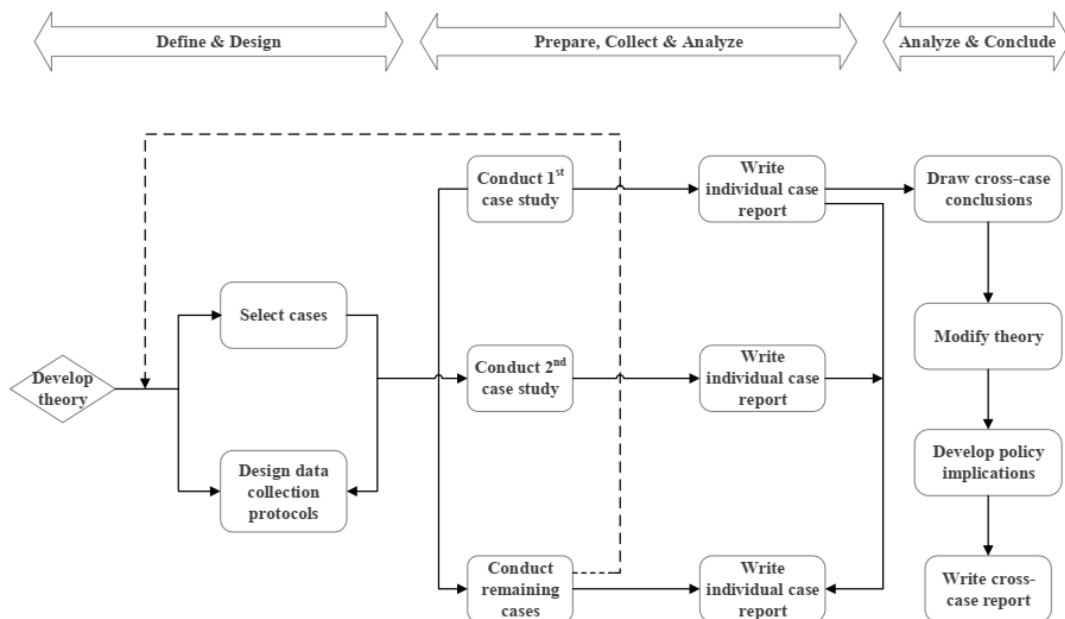


Figure 3.2: Multiple-case study procedure according to Cosmos Corporation⁸

⁸ Multiple-case study procedures according to *Cosmos Corporation* as cited by Yin (2018)

3.10. Conclusion

This chapter described the systematic research methodology employed to explore PMO practices in the public construction sector. The study employed a descriptive-exploratory and descriptive-explanatory multiple-case study design based on Yin's (2009) framework to validate common patterns and investigate organizational differences through literal and theoretical replication. The inclusion of embedded units of analysis—including governance, staffing, capacity building, and operational roles—allowed for a more comprehensive examination of PMO practices. A triangulation of data collection strategies, including interviews, document reviews, and surveys, ensured methodological rigor and empirical richness. To ensure the integrity of the research process, ethical protocols such as informed consent and confidentiality were followed. Overall, this chapter establishes the foundation for the subsequent chapter's cross-case analysis and evidence-based recommendations.

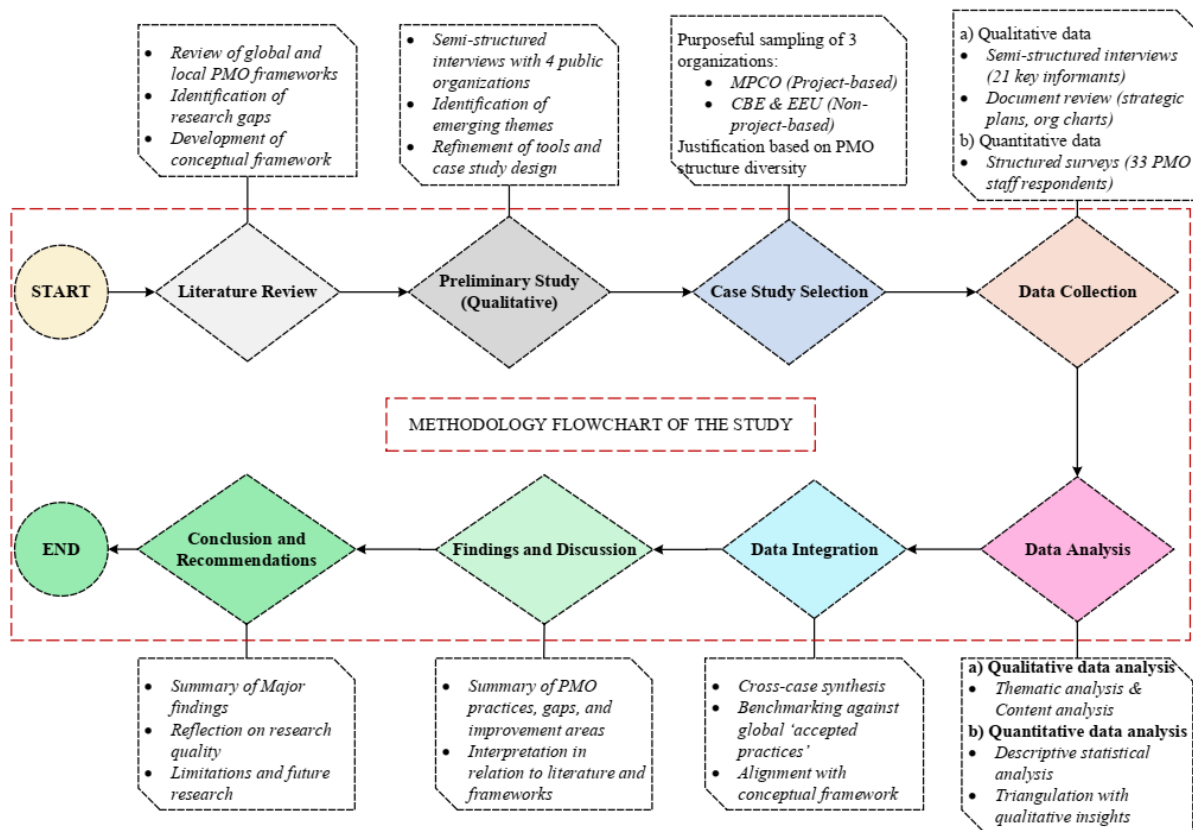


Figure 3.3: Methodology flowchart of the study

CHAPTER FOUR

4. DATA ANALYSIS AND DISCUSSIONS

This chapter presents and discusses the results and findings of the data collected using the research instruments described in the previous chapter. The study aims to provide a comprehensive understanding of project management office (PMO) practices in the selected case study organizations by integrating qualitative insights from thematic analysis and quantitative data from survey analysis. The thematic analysis explores key themes from interviews with PMO key informants, while the survey analysis validates and supplements these findings with structured quantitative data. Then the observed practices are cross-analyzed against global project management standards, frameworks and best practices—globally ‘*accepted practices*’. The objective is to identify gaps, existing challenges, and areas for improvement in alignment with global best practices.

4.1. Overview of Data Collection and Analysis Methods

A structured case study protocol was developed to ensure that data collection was consistent, reliable, and transparent across the selected organizations. This protocol established a systematic framework for case selection, data collection, and analysis, enhancing methodological rigor.

Semi-structured interviews were chosen as the primary data collection method because they provide detailed, contextually rich insights. Interview guides were created to ensure consistency while also allowing for additional probing based on participant responses. To supplement qualitative findings, a structured questionnaire with multiple-choice, Likert-scale, and open-ended questions was designed to capture quantitative perspectives on PMO practices.

Respondents to the survey had a diverse educational background and project management experience, reflecting differences in organizational structure and culture. MPCO, as a project-based organization, expected to have a workforce aligned with project management practices, whereas EEU and CBE, as non-project-based organizations, had more diverse PMO staffing compositions. Given the small PMO workforces in the selected organizations, the number of survey participants was relatively small. The survey received a response rate of 50.7%, with 9 respondents from EEU (60%), 11 from CBE (44%), and 13 from MPCO (52%). Although the

sample size was small, it provided useful quantitative insights that supplemented the qualitative thematic results.

Thematic analysis was used to identify recurring patterns in qualitative responses, and descriptive statistical methods—such as frequencies and means—were used to summarize quantitative survey results. Due to the limited number of responses, inferential statistical tests were not feasible, as such analyses require larger sample sizes to ensure statistical power and generalizability. Instead, the study followed best practices in case study research (Yin, 2009), in which qualitative insights are the primary analytical focus and quantitative data provide supplementary validation. Throughout the study, methodological triangulation was used to improve the validity of findings by combining data from interviews and surveys, resulting in a thorough understanding of PMO practices within the case study organizations.

Table 4.1: Summary of survey respondents from the case study organizations [Responded]

<i>Organization</i>	<i>Planned PMO Staff (Employees)</i>	<i>Distributed</i>	<i>Responded</i>	<i>Response rate (%)</i>
<i>EEU</i>	15-29	15	9	60
<i>CBE</i>	30-99	25	11	44
<i>MPCO</i>	30-99	25	13	52
<i>Overall</i>				50.77

4.2. Discussion of Findings

This section first presents the thematic analysis findings, which include relevant quotes from thoroughly transcribed interviews, and then the survey analysis and its alignment with PMO global best practices. The objective is to investigate project management office (PMO) practices in the selected case study organizations, with a focus on PMO structures and governance, PMO staffing and competency levels, PMO training and capacity building, PMO challenges and effectiveness, and areas for improvement.

Thematic analysis focuses on key themes from interviews with key PMO informants in the case study organizations, while survey analysis validates and supplements these findings with

structured quantitative data. Then current PMO practices in the case study organizations are cross-analyzed against global project management standards, frameworks and best practices (Varajão et al., 2024), referred to as ‘*accepted practices*’, such as PMBOK (PMI, 2021), PMI Talent Triangle (PMI, 2022), P3O (Axelos, 2013), P3M3 (Axelos, 2016), ISO 21502 (ISO, 2020), ISO 31000 (ISO, 2018), and the national working manual—the Ethiopian Construction Project Management Manual Series (ECPMI ECPMMS:WM-17) (ECPMI, 2019) to identify gaps and make recommendations for improvement.

4.2.1. The case study of Mega Project Construction Office (MPCO)

Demographic characteristics of MPCO’s survey respondents

Understanding the respondents' demographics provides useful information about their expertise, experience, and role distribution within the Mega Projects Construction Office (MPCO). The majority of survey respondents (69.2%) held master's degrees, with bachelor's degrees accounting for 30.8%. This indicates that the workforce is academically qualified, implying a solid theoretical foundation in project management and other fields. However, academic qualifications alone do not guarantee effective project execution; practical experience and specialized training are also important.

In terms of professional experience, 53.8% of respondents had 11-15 years, 30.8% had 5-10 years, and 15.4% had more than 15 years. The predominance of junior-to-mid-level professionals in MPCO suggests that the organization benefits from experienced personnel capable of managing complex projects. However, the low proportion of respondents with more than 15 years of experience may indicate a lack of long-term strategic leadership and institutional knowledge retention within the PMO.

In terms of role distribution, 76.9% of respondents identified as PMO managers or staff, with 15.4% as functional managers and 7.7% as project managers. The high concentration of PMO staff demonstrates MPCO's reliance on a structured project management office to oversee construction projects. Overall, the workforce's educational qualifications and extensive project management experience suggest that it is capable of implementing structured PMO practices.

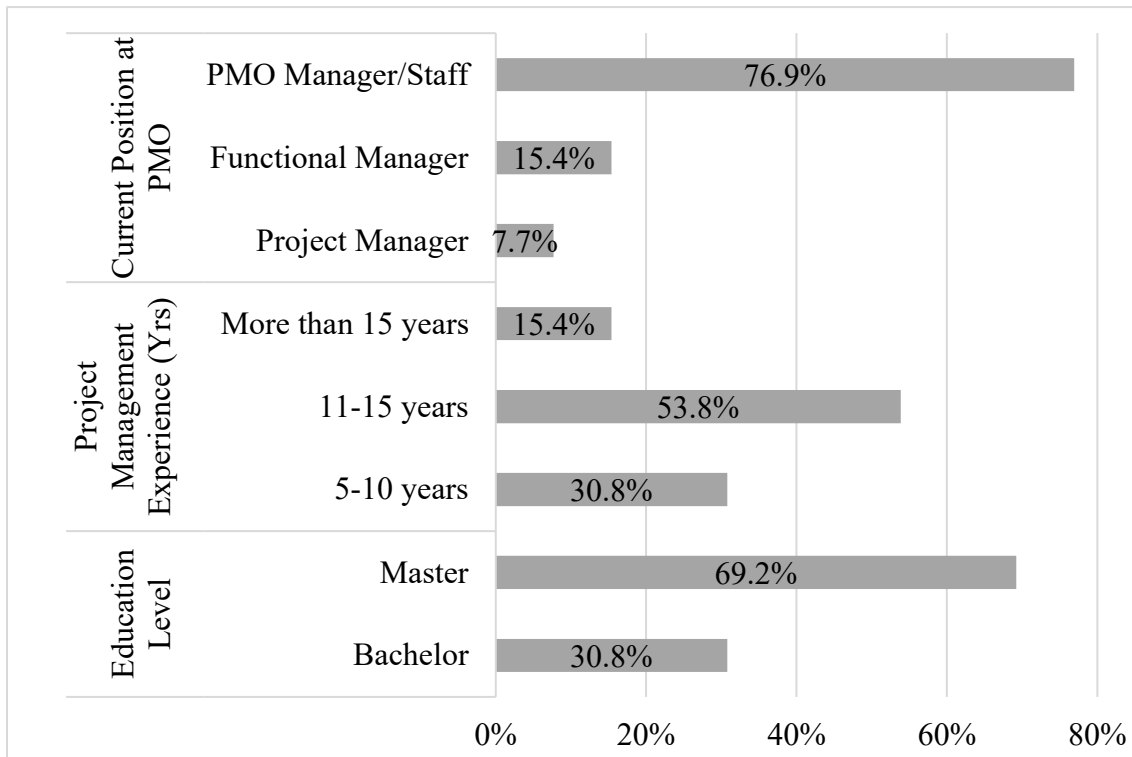


Figure 4.1: Demographic characteristics of MPCO survey respondents

Discussion of thematic findings and comparison with ‘accepted practices’

A. PMO structure and governance at MPCO

The MPCO organizational structure is divided into two primary sectoral wings: construction and corporate, each led by a deputy manager who reports to the General Manager (GM). This hierarchical structure improves governance efficiency by ensuring distinct roles and structured decision-making within each directorate. However, governance issues continue due to frequent leadership changes and the lack of a formalized project charter approval process.

One of the most pressing governance issues is the high turnover rate among senior leadership. MPCO has had four different general managers over the last four years, resulting in inconsistencies in decision-making and disruptions to governance structures. A directorate-level official emphasized the negative impact of leadership instability on project success, saying,

“Over the last four years, MPCO has had four different general managers. The overall organizational structure setup reflects the new leadership—changes with the newly

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

*appointed GM, which have a direct impact on project performance and success.”—
Director, MPCO.*

Another governance issue is a lack of signed project charters, which results in accountability gaps and undermines governance mechanisms. The lack of a structured project charter approval process weakens project oversight, stakeholder alignment, and accountability mechanisms, increasing the risk of mismanagement and inefficiency. A team leader at MPCO emphasized this concern, stating,

“We currently have about 30 projects running without a signed project charter, which creates a serious accountability gap.”—Team Leader, MPCO.

In general, the thematic analysis emphasizes the link between leadership instability and governance inconsistencies, emphasizing the need for resilient frameworks that can withstand changes in senior management. These findings show that, while MPCO has a governance framework in place, its scope and influence are limited due to leadership instability and ineffective governance policies.

The survey analysis results provide additional quantitative validation of these governance challenges and reinforce the thematic findings. MPCO (PMO) operates at the departmental level, and despite being in operation for more than four years, its strategic influence is limited to departmental functions rather than enterprise-wide governance.

Table 4.2: PMO size, level of influence, and years of operation at MPCO

PMO Influence Level	Departmental level
PMO in Operation (Yrs.)	4+ years
PMO Size (Employees)	30-99 employees (planned)

Comparison with ‘accepted practices’

The findings highlight issues with PMO structure and governance, as demonstrated by its limited strategic influence over departmental functions rather than enterprise-wide governance. Persistent leadership instability, as evidenced by the appointment of four general managers in four years, has

weakened governance frameworks further. Furthermore, the lack of signed project charters has resulted in accountability gaps and limited oversight.

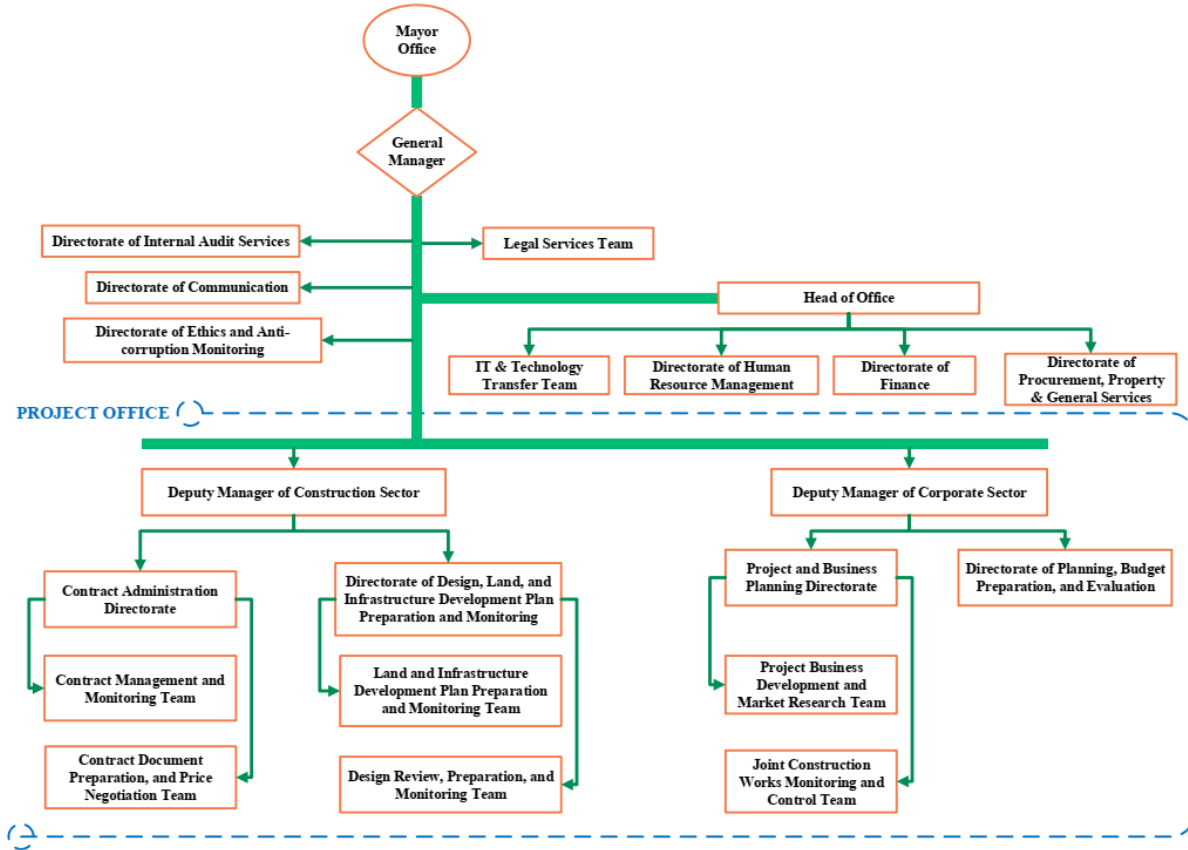


Figure 4.2: An overview of the organizational structure of PMO/PO of MPCO

Global best practices offer comparative insights that highlight the importance of structured governance as well as significant opportunities for addressing MPCO governance issues. Signed project charters, as recommended by the PMBOK (Seventh Edition), can bridge accountability gaps and strengthen oversight mechanisms, ensuring that project objectives are clearly defined and meet stakeholder expectations (PMI, 2021).

Adopting the P3O framework can aid in mitigating the effects of leadership instability by strengthening governance structures that remain effective even during managerial changes (Axelos, 2013). Furthermore, adhering to ISO 21502's (ISO, 2020) guidelines for standardized governance policies can improve PMO resilience and consistency, allowing for long-term

organizational alignment and strategic progress. Adopting these frameworks allows MPCO to create a more robust and adaptive governance model with greater enterprise-wide influence.

B. PMO staffing and competency at MPCO

MPCO is currently facing a significant staffing shortage, particularly in key staff roles such as quantity surveying and procurement. One of the major issues identified in the thematic analysis is the lack of a structured competency framework in the recruitment process. Instead of focusing on standardized qualifications and certifications, MPCO's hiring strategy heavily emphasizes work experience, resulting in skill gaps and inefficiencies in project execution. A human resources (HR) representative from MPCO emphasized this issue, stating:

“There is no well-defined recruitment framework, and many positions lack specialized professionals. We are conducting an internal assessment to address staffing issues by incorporating missing key professional mixes into the MPCO staff.”—HR, MPCO.

This interviewee's concern emphasizes the lack of competency-based recruitment and reveals a misalignment between hiring practices and modern project management requirements. Although some MPCO staff hold competency certificates from the Ethiopian Construction Authority (ECA), there are no formal requirements for industry-standard project management certifications such as Project Management Professional (PMP) or PMO Certified Practitioner (PMO-CP).

Table 4.3: A frequency distribution of PMO staffing selection criteria at MPCO

		Responses		Percent of Cases
		N	Percent	
PMO Staffing Criteria ^a	Experience in project management	11	33.3%	84.6%
	Relevant certifications	8	24.2%	61.5%
	Technical expertise	9	27.3%	69.2%
	Leadership skills	5	15.2%	38.5%
Total		33	100.0%	--
a. Dichotomy group tabulated at value 1.				

The survey results quantify these competency gaps, supporting the findings of the thematic analysis. 84.6% of respondents prioritized project management experience as the primary hiring

criterion, while 69.2% prioritized technical expertise, indicating that specialized skills are still a secondary factor in recruitment. Only 61.5% of respondents considered relevant certifications as a hiring criterion, implying that standardized project management qualifications are undervalued in the hiring process.

Comparison with ‘accepted practices’

The findings highlight significant challenges in PMO staffing and competency at MPCO. Experience is heavily prioritized over standardized qualifications in recruitment efforts, accounting for 84.6% of hiring decisions. While this approach values practical knowledge, it has resulted in a shortage of staff with industry-recognized certifications such as PMP or PMO-CP. Furthermore, critical staff shortages are apparent, particularly in procurement and quantity surveying roles, threatening operational efficiency.

MPCO can address current competency gaps and workforce shortages by aligning its staffing practices with global best practice guidelines. The PMI Talent Triangle emphasizes the importance of balancing technical, leadership, and strategic competencies among PMO teams (PMI, 2022). Similarly, ISO 21502 and P3M3 promote competency-based hiring practices that are supplemented by structured training programs to improve employee capabilities (Axelos, 2016; ISO, 2020). Furthermore, the ECPMMS:WM-17 emphasizes the project team's competence in construction project management knowledge areas as well as construction technology-related competencies, practices, and regulations (ECPMI, 2019). Integrating these globally recognized frameworks can help MPCO develop a more qualified, strategically aligned, and resilient workforce.

C. PMO training and capacity building at MPCO

A thematic analysis of interviews with MPCO staff reveals that training and capacity-building initiatives are largely inconsistent, budget-dependent, and primarily focused on general leadership and anti-corruption training rather than core project management skills. This lack of structured professional development is especially concerning given the growing complexity and scale of MPCO's construction projects. A senior member of the PMO staff pointed out this gap, stating:

“The majority of our training is non-technical. We need structured training and capacity-building programs, especially for project management methodologies.”—Senior staff, MPCO.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

The interviewee's concern highlights a significant need for structured competency development, particularly in project management methodologies, contract management, and project documentation. Without a well-defined capacity-building framework, PMO personnel are forced to navigate complex projects with insufficient training in industry best practices and technical skills.

The survey analysis quantifies the gaps identified in the thematic findings, providing empirical support for the qualitative insights. While 69.2% of respondents prioritized technical training, only 38.5% identified project management methodologies as a critical training need. This reinforces the interview findings that technical skills are prioritized over structured project management frameworks such as PMBOK and Agile. 53.8% of respondents prioritized leadership development, while only 15.4% prioritized soft skills training. This indicates an imbalance in technical and managerial competency development, which may have an impact on decision-making and project leadership.

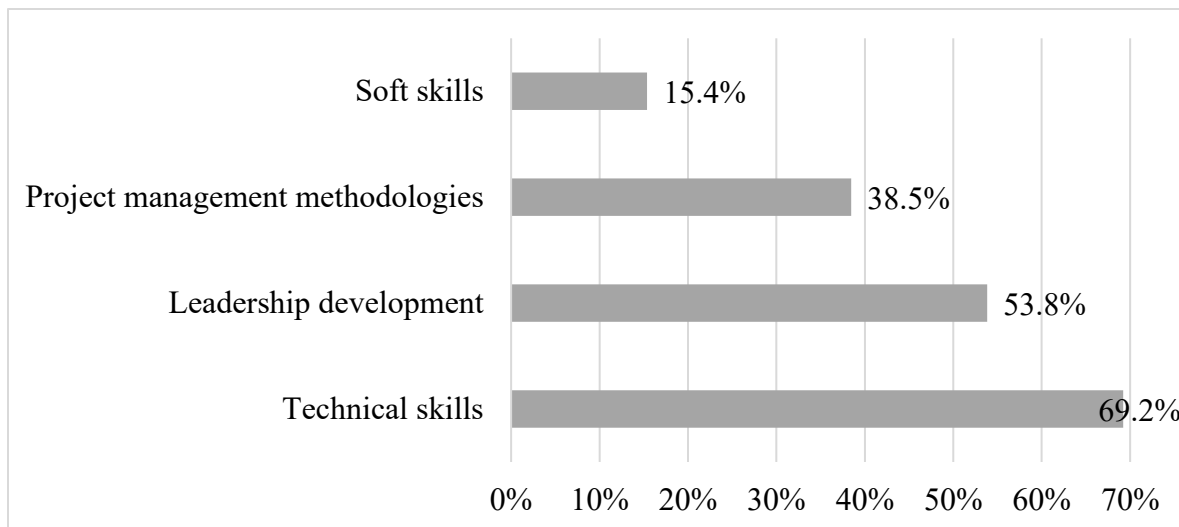


Figure 4.3: A frequency distribution of PMO training focus areas at MPCO

Comparison with ‘accepted practices’

The findings indicate that several critical issues affecting MPCO's training and capacity-building efforts. Currently, training initiatives are unstructured and primarily focused on non-technical areas such as anti-corruption and leadership development, excluding critical technical project management competencies. Furthermore, there is little exposure to globally recognized project

management methodologies such as PMBOK, Agile, etc. Budget constraints compound these issues, limiting opportunities for continuous professional development.

Global best practices offer a roadmap for overcoming these limitations. Both the PMBOK (PMI, 2021) and the P3O framework (Axelos, 2013) emphasize the importance of establishing structured competency-building programs to ensure comprehensive skill development. General industry best practices also suggest allocating 5-10% of the PMO's budget to continuous training initiatives, which promotes a culture of long-term professional development. Implementing these practices enables MPCO to improve technical expertise, ensure methodological alignment, and address financial constraints on capacity building.

D. PMO key drivers and primary roles at MPCO

The establishment of the MPCO (PMO) was primarily motivated by the need to address persistent resource distribution issues, ensuring that high-priority and complex projects receive adequate human and financial resources. This insight from the preliminary study findings is strongly supported by the survey results, which show that MPCO's PMO was established primarily to optimize resource allocation and sharing, with 100% of respondents agreeing on its significance. Other key drivers include:

- Alignment of project goals with strategic objectives (84.6%), highlighting the PMO's role in ensuring projects contribute to overall organizational goals.
- Improving organizational performance (76.9%), implying that the PMO is viewed as a tool for improving operational efficiency.
- Improvements in project visibility and reporting (69.2%), indicating that project tracking and evaluation should be more transparent.
- Standardization of project management methodologies (61.5%), indicating an effort to introduce consistency in project execution.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*



Figure 4.4: A frequency distribution of PMO key drivers at MPCO

According to the survey results, the MPCO has two primary roles: project coordination (92.3%) and support and facilitation (76.9%), particularly for large-scale projects. These findings imply that the MPCO is primarily concerned with ensuring that projects run smoothly through logistical and operational support.

Governance and oversight (61.5%), while important, appear to be areas that could be improved. Effective governance mechanisms ensure project compliance while mitigating risk. Strategic alignment (46.2%) indicates a gap in the PMO's role in connecting projects to overall organizational strategy. The underrepresentation of governance and oversight, as well as strategic alignment, suggests that MPCO functions more as an execution entity than a strategic governance body.

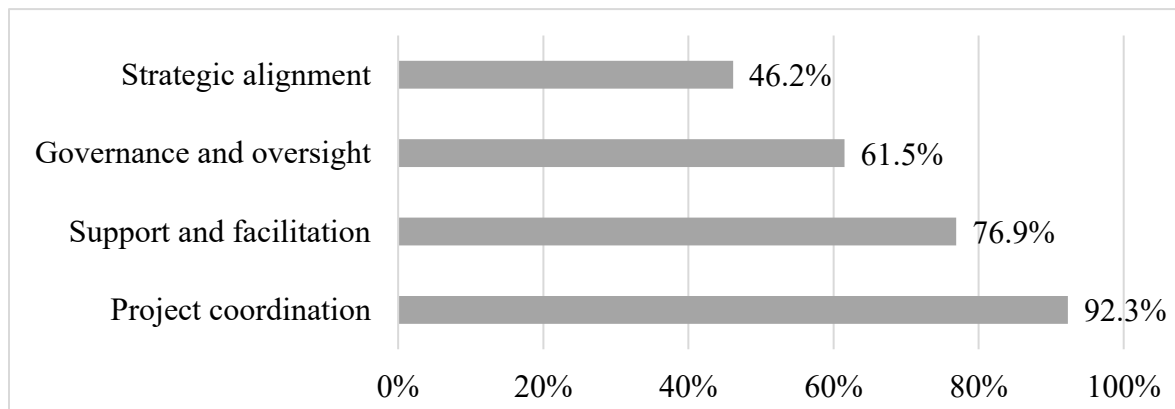


Figure 4.5: A frequency distribution of PMO primary roles at MPCO

E. PMO challenges and effectiveness at MPCO

The MPCO is currently facing significant operational challenges that are limiting its effectiveness in project execution. A major issue identified in the thematic analysis is the lack of signed project charters and contract documents, which exposes projects to financial and legal risks. This problem is exacerbated by bureaucratic inefficiencies, low stakeholder engagement, and the lack of a structured risk management framework. As one MPCO team leader noted,

“Getting into the construction phase without signed contract documents creates significant risks, leading to disputes and financial uncertainty.”—Team Leader, MPCO.

The interviewee's concern highlights the ineffective contract approval process, which increases the likelihood of disputes and delays.

According to the survey analysis results, excessive workload burdens are a critical challenge within the PMO, as highlighted by 92.3% of respondents. In addition, 84.6% of respondents reported difficulty aligning project objectives with organizational goals, indicating inefficiencies in strategic execution and project governance. Furthermore, 69.2% of respondents identified poor stakeholder communication as a major challenge, highlighting gaps in project coordination and stakeholder engagement.

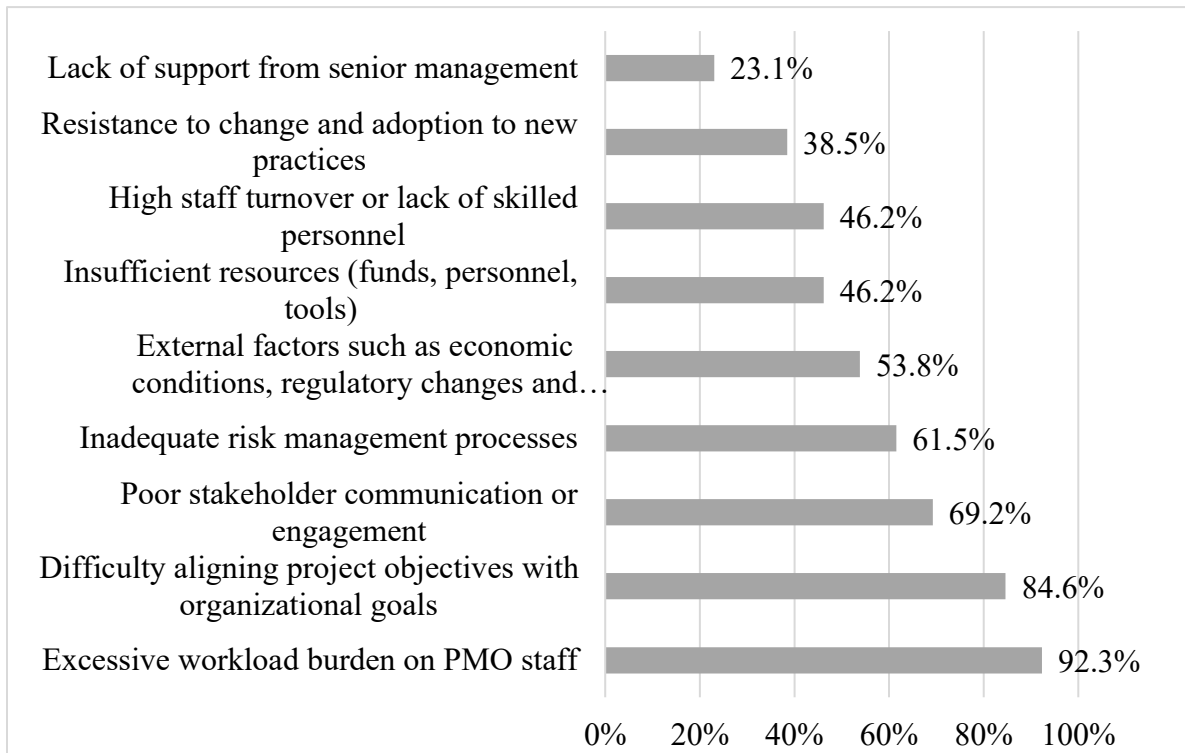


Figure 4.6: A frequency distribution of PMO's major challenges at MPCO

Comparison with 'accepted practices'

The analysis of PMO challenges reveals several critical issues that limit MPCO's operational and strategic performance. Excessive workload burdens have compromised efficiency, limiting the PMO's capacity to execute projects effectively. Furthermore, difficulties in aligning projects with overarching organizational goals have weakened its strategic impact, reducing the value it adds to the overall enterprise. Furthermore, gaps in stakeholder communication have hindered project coordination, resulting in inefficiencies and misalignment of expectations.

Global best practices provide practical guidance on how to deal with these issues. The ISO 31000 (ISO, 2018) risk management—guidelines recommends the proactive implementation of structured risk assessment mechanisms to identify and mitigate workload and alignment risks. Similarly, the PMBOK Guide (PMI, 2021) emphasizes the significance of strong stakeholder engagement frameworks in improving communication, streamlining coordination, and ensuring

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The Case of Selected Organizations in Addis Ababa*

alignment with organizational goals. Implementing these best practices can help MPCO improve its operational efficiency, strategic alignment, and overall project management effectiveness.

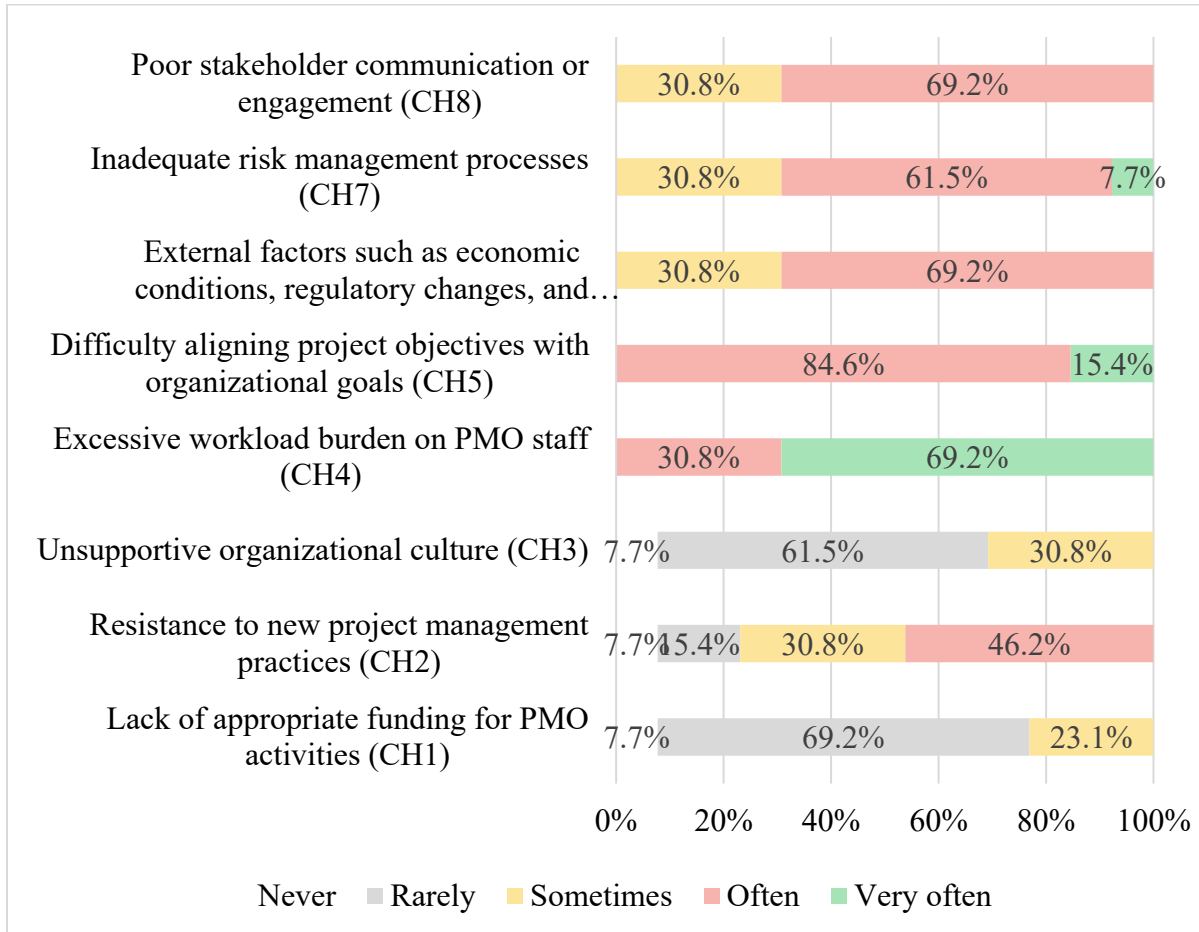


Figure 4.7: A frequency distribution of PMO's major challenges at MPCO on 5-point Likert scale

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

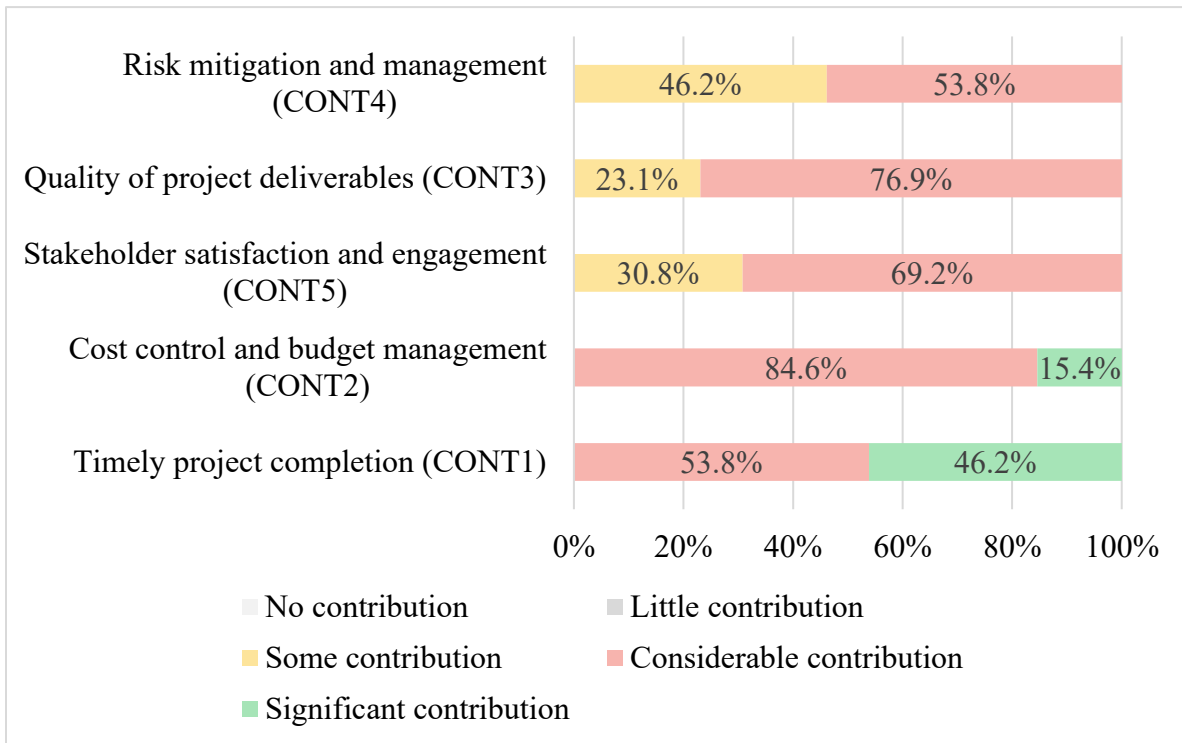


Figure 4.8: A frequency distribution of PMO's contributions at MPCO on 5-Point Likert scale

Moreover, a Likert-scale analysis quantifies these findings, providing a structured assessment of the PMO's challenges, contributions, and overall effectiveness. The results show that PMO challenges received an overall mean score of 3.44, indicating that operational difficulties occur frequently and require targeted interventions. The PMO received an overall mean contribution score of 3.92, indicating a significant positive impact—*considerable contribution*—while also highlighting areas for improvement.

Furthermore, PMO effectiveness received a 4.0 overall score, indicating strong performance—*quite effective*—while also highlighting areas for continuous improvement, particularly stakeholder engagement and risk management.

Table 4.4: Descriptive statistics of PMO [challenges, contribution and effectiveness] at MPCO

<i>Constructs/variables</i>	<i>Codes</i>	<i>Overall mean score</i>	<i>Standard devi.</i>	<i>Agreement degree</i>	<i>Interpretation</i>
<i>PMO challenges</i>	CHs	3.44	0.14	Often	
<i>PMO contributions</i>	CONTs	3.92	0.34	Considerable Contribution	
<i>PMO effectiveness</i>	EFFs	4.0	0.0	Quite Effective	

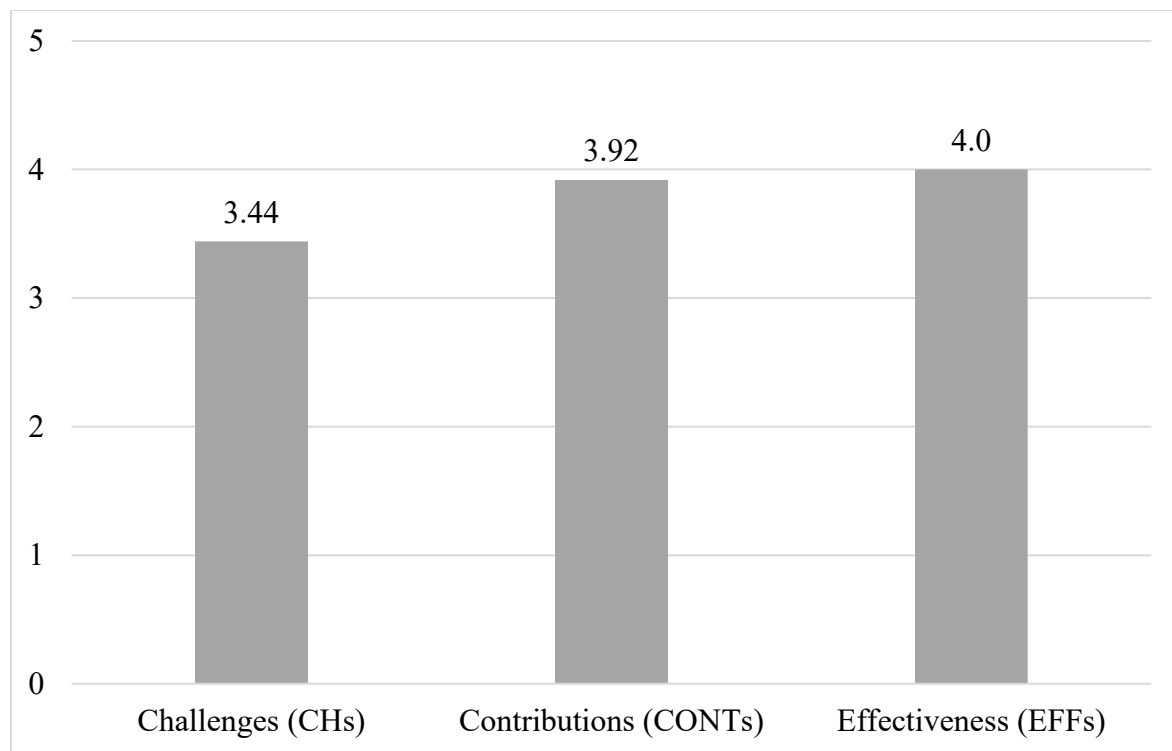


Figure 4.9: PMO [challenges, contribution and effectiveness] on 5-Point Likert scale

F. PMO improvement areas and future outlook at MPCO

During the one-on-one interview, many key informants discussed the City Administration's ongoing digital transformation initiatives, which are expected to significantly improve the MPCO's project management operations. One significant initiative is the digitization of contract document preparation, which aims to improve efficiency, reduce administrative bottlenecks, and streamline

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

contract management processes. Given the MPCO's critical role in managing large-scale projects, this initiative is expected to improve overall project execution by ensuring greater transparency, accuracy, and accessibility of contract-related information.

Beyond contract digitization, smart infrastructure projects are being implemented as part of a larger smart city development initiative. These projects aim to incorporate cutting-edge technologies into urban development, thereby improving service delivery, sustainability, and infrastructure resilience. For the MPCO, such initiatives provide opportunities to use digital tools, data-driven decision-making, and modern project monitoring techniques to improve its ability to manage complex projects efficiently.

Despite these advancements, staff shortages and operational inefficiencies remain persistent issues. To improve organizational efficiency, these issues necessitate strategic workforce planning, capacity-building initiatives, and process optimization. Furthermore, investing in continuous professional development, adopting international PMO best practices, and implementing standardized project management frameworks may improve the PMO's operational capacity. Many key informants agreed that by effectively addressing these challenges, MPCO can establish itself as a leading entity in project governance and execution, ensuring long-term growth and better project outcomes.

Conclusion and recommendations

The case study of the Mega Project Construction Office (MPCO) identifies critical governance, operational, and competency challenges that undermine the strategic impact of its project management office (PMO). Despite its well-defined structure and staff (workforce) with significant academic qualifications (69.2% hold master's degrees), the PMO's influence is largely limited to departmental operations, with insufficient enterprise-wide alignment. Persistent leadership instability, as evidenced by four general managers in as many years, has exacerbated governance inconsistency. Furthermore, the absence of signed project charters and contract documents have resulted in accountability gaps, weakened stakeholder alignment, and increased risks of project management failure. The PMO's staffing strategy prioritizes work experience over standardized qualifications, resulting in skill gaps and operational inefficiencies. Although some

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

staff members hold Ethiopian Construction Authority (ECA) certifications, industry-recognized certifications such as PMP and PMO-CP are completely missing, aggravating skill gaps. Training initiatives at MPCO are inconsistent, budget-dependent, and primarily focused on general leadership rather than critical technical skills such as project documentation, contract management, and risk assessment. Survey results highlight these deficiencies, with 69.2% of respondents emphasizing the need for technical training.

Operational challenges further hinder PMO effectiveness. Excessive workload burdens, poor stakeholder communication, and inadequate risk management frameworks constrain project execution. Despite these challenges, the PMO has made significant contributions to cost control and project completion on time, indicating significant potential for future improvement and optimization. The findings suggest that in order to align with global best practices, MPCO should implement strong governance frameworks, competency-based staffing policies, and structured training programs. Furthermore, adopting frameworks such as ISO 21502, PMBOK, and P3O can improve strategic oversight, leadership resilience, and professional development within the PMO (Axelos, 2013; ISO, 2020; PMI, 2021).

To address these challenges, MPCO should put in place an ISO 21502 (ISO, 2020)—compliant governance framework that standardizes project initiation processes and enforces signed project charters, thereby improving accountability and stakeholder alignment. To improve workforce competency, structured hiring criteria emphasizing PMP and PMO-CP certifications, as well as continuous training programmes aligned with the PMI Talent Triangle (PMI, 2022) and ISO (ISO, 2020) standards, should be implemented.

Implement stakeholder engagement strategies based on the PMBOK (PMI, 2021) stakeholder engagement framework to improve communication and collaboration. Furthermore, optimizing resource allocation and digitizing processes such as contract management will reduce workload and improve efficiency. Addressing these gaps and implementing global best practices will enable MPCO to elevate its PMO to the level of strategic governance, ensuring long-term project success and organizational alignment.

4.2.2. The case study of Commercial Bank of Ethiopia (CBE)

Demographic characteristics of CBE survey respondents

Understanding the demographic composition of the Commercial Bank of Ethiopia's (CBE) project management office (PMO) workforce is critical for assessing its effectiveness and capability in managing construction projects. The majority of the workforce has advanced academic qualifications, with 72.7% holding a master's degree and 27.3% holding a bachelor's degree. This indicates that the workforce is academically qualified, implying a solid theoretical foundation in project management and other fields. Academic qualifications, on their own, do not guarantee effective project execution; practical experience and specialized training are also required.

The PMO also has extensive professional experience, with 54.5% of its members having more than 15 years of experience, 36.4% having 5 to 10 years, and only 9.1% having less than 5 years. Within the PMO, 63.6% of the workforce holds managerial or staff positions, 27.3% are project managers, and 9.1% are business analysts. While the CBE's PMO workforce is recognized for its extensive experience and expertise, a low proportion of early-career professionals may limit the adoption of innovative practices and modern project management methodologies. Overall, the workforce's educational qualifications and extensive project management experience suggest that it is capable of implementing structured PMO practices.

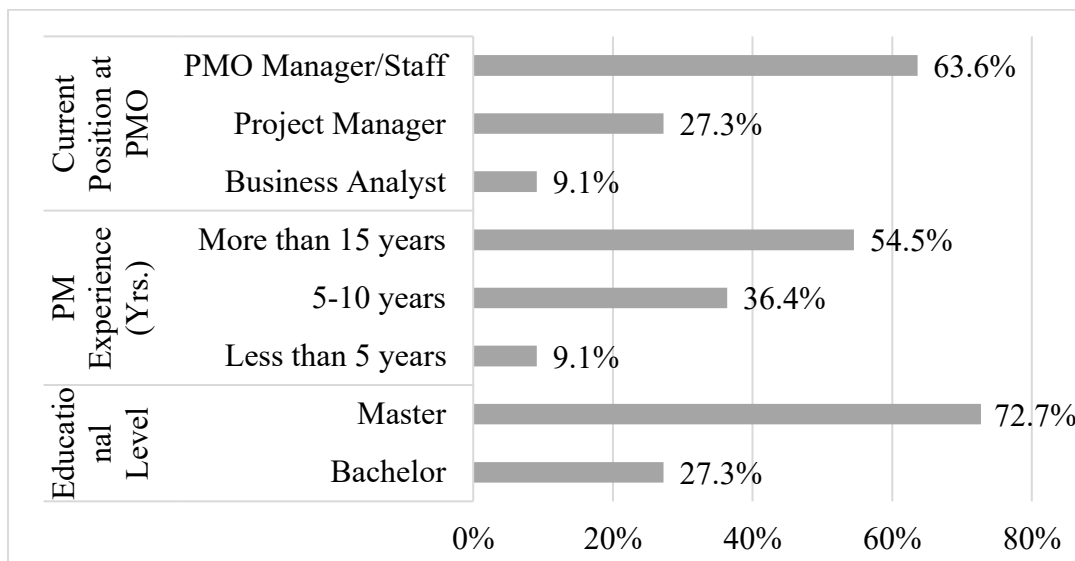


Figure 4.10: Demographic characteristics of CBE survey respondents

Discussion of thematic findings and comparison with ‘accepted practices’

A. PMO structure and governance at CBE

The Commercial Bank of Ethiopia (CBE) has set up a project management office (PMO) within its Building Construction Management Department to manage large-scale construction projects such as the CBE headquarters building, as well as branch expansions. This structured integration aims to enhance project execution efficiency and align construction initiatives with the bank’s strategic goals. The PMO is led by a director and reports to the Vice President of Facility Management (VPFM), ensuring a clear chain of command for project oversight.

The organizational structure of the PMO is composed of three specialized units, each playing a crucial role in managing the lifecycle of construction projects:

- *Construction business analysis and quality management unit*—Responsible for conducting feasibility studies, overseeing design activities, and ensuring compliance with construction standards.
- *Construction contract management unit*—Oversees contract administration, project coordination, and execution, with project managers working alongside specialized professionals such as civil, mechanical, and architectural engineers.
- *Lease administration management unit*—Manages land acquisition and lease arrangements, collaborating with other units during the pre-construction phase to facilitate project initiation.

While this structured approach provides a clear operational framework, governance challenges persist within CBE’s PMO. One of the primary concerns is the limited authority of the PMO over high-level decision-making processes, requiring major project-related approvals to undergo extensive executive-level reviews. This bureaucratic procedure leads to inefficiencies and delays, particularly in securing approvals for time extensions and price escalations, as noted by one of the interviewees, a project manager at CBE.

“In some cases, strict procedural adherence within CBE’s banking structure has allowed contractors to profit from procedural delays, affecting construction timelines.”—Project Manager, CBE.

Another interviewee in the senior manager position shared the project manager's notable governance insight and proposed a solution.

“Establishing an in-house project execution task force could help to reduce such delays. The Smart Branch Office Building Projects, which were completed in three months by outsourced contractors, could have been managed internally if the PMO had its own project execution capability.”—Director, CBE.

However, the director warned against over-reliance on in-house execution.

“Increasing in-house project execution capability may improve efficiency, but it also poses a strategic challenge—a greater focus on construction project management may divert CBE's attention away from its core banking operations”. —Director, CBE.

The interviewee's concern emphasizes the importance of maintaining a balanced approach that combines in-house capabilities with strategic outsourcing.

Table 4.5: A summary of PMO size, level of influence, and years of operation at CBE

PMO Influence Level	Departmental level
PMO in Operation (Yrs.)	More than 10 years
PMO Size (Employees)	30-99 employees (planned)

Furthermore, the survey results shed light on these governance challenges and reinforce the thematic findings. The CBE's PMO operates at the departmental level, and despite being in operation for more than a decade, its strategic influence is limited to departmental functions rather than enterprise governance.

Comparison with ‘accepted practices’

The findings highlight issues with CBE's PMO structure and governance, as demonstrated by critical operational challenges that affect efficiency and strategic alignment. Currently, the PMO operates at the department level—Building Construction Management—rather than at the enterprise level, limiting its impact on broader organizational goals. Major project approvals necessitate executive-level reviews, which introduce bureaucratic inefficiencies that delay decision-making. Furthermore, the PMO's limited authority over critical decisions, such as time

extensions and price escalations, has resulted in significant delays. Potential solutions are identified through a comparison to global best practices.

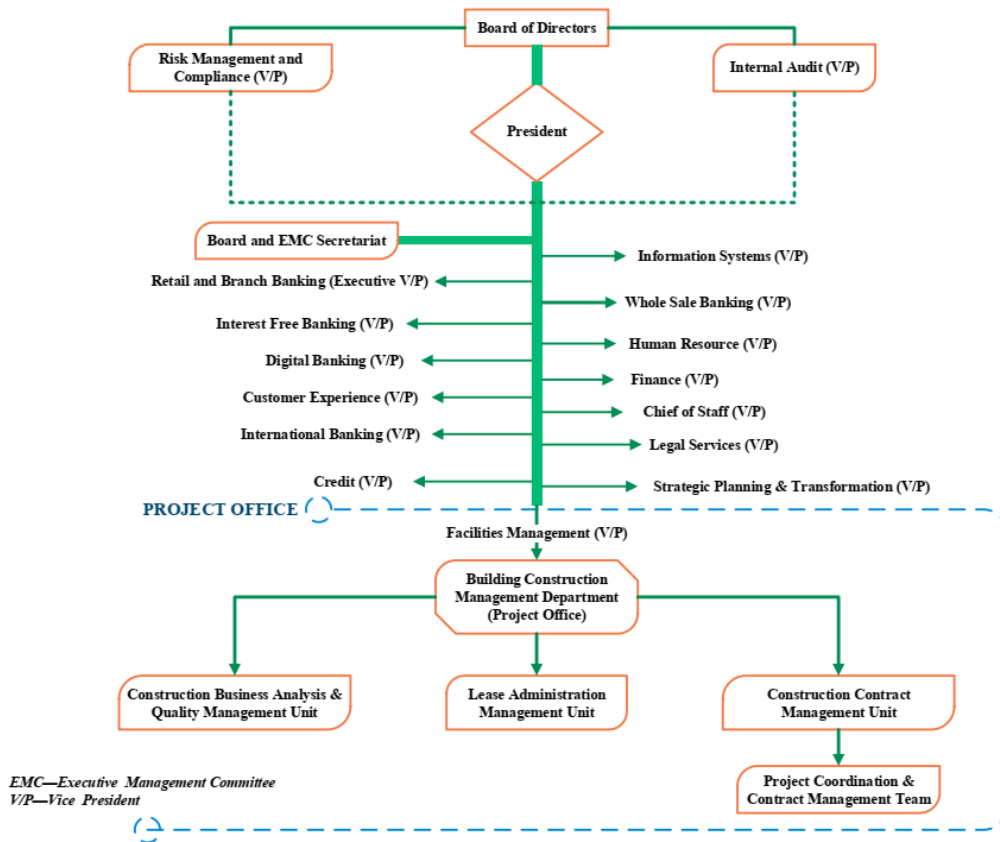


Figure 4.11: An overview of the organizational structure of PMO/PO of CBE

The PMBOK Guide (Seventh Edition) encourages the adoption of an enterprise-wide PMO model to facilitate strategic alignment across all organizational functions (PMI, 2021). The PRINCE2 (Axelos, 2015) framework recommends streamlining decision-making processes to eliminate unnecessary approval bottlenecks and improve operational efficiency. Furthermore, ISO 21502 (ISO, 2020) recommends implementing structured governance frameworks that reduce procedural rigidity while maintaining accountability. Implementing these best practices will enable CBE's PMO to transition to a more agile and strategic governance model.

B. PMO staffing and competency at CBE

The Commercial Bank of Ethiopia (CBE) initially encountered significant staffing challenges in its project management office (PMO), due to the scarcity of qualified professionals in the local market. Furthermore, the absence of a dedicated HR unit for the PMO exacerbated recruitment issues, making it difficult to attract and retain top-tier project management talent. One interviewee, a senior project manager at CBE, stated that these challenges had a direct impact on the execution of the bank's large-scale projects.

“Managing a megaproject like the CBE Headquarters required a dedicated PMO with highly skilled professionals. However, the shortage of experienced project managers significantly affected project execution.”— Senior Project Manager, CBE.

To address this gap, CBE partnered with Addis Ababa University (AAU) to act as a client representative, facilitating knowledge transfer and the recruitment of qualified professionals from diverse engineering and project management disciplines. Over time, the PMO successfully established a stable and experienced workforce, with staff experience ranging from 5 to 25 years.

Employee retention rates were high due to the banking sector's competitive salary and benefits package. CBE has also implemented regular competency assessments to identify skill gaps and provide targeted training. According to one interviewee, a senior PMO staff member,

“The PMO now has a diverse range of experience, from junior professionals to senior experts with over two decades in the field. Continuous assessments and in-house training programs have assisted us in the development of internal capabilities.”—Senior PMO Staff, CBE.

While technical expertise is emphasized during key staffing recruitment, formal project management certifications are not a mandatory requirement for recruitment or promotion. This limits the adoption of structured project management methodologies within the PMO.

The survey results support these qualitative findings by highlighting the key selection criteria for PMO staffing.

- 90.9% of respondents ranked technical expertise as the most important factor in hiring decisions, confirming the PMO's emphasis on engineering and construction skills.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

- 81.8% of respondents prioritized project management experience, indicating that practical experience is valued in addition to technical qualifications.
- Only 36.4% prioritized relevant certifications, implying that formal training in global project management frameworks is not a major hiring requirement.
- Leadership skills accounted for 54.5%, indicating that structured leadership development programs are not yet a top priority for the CBE's PMO.

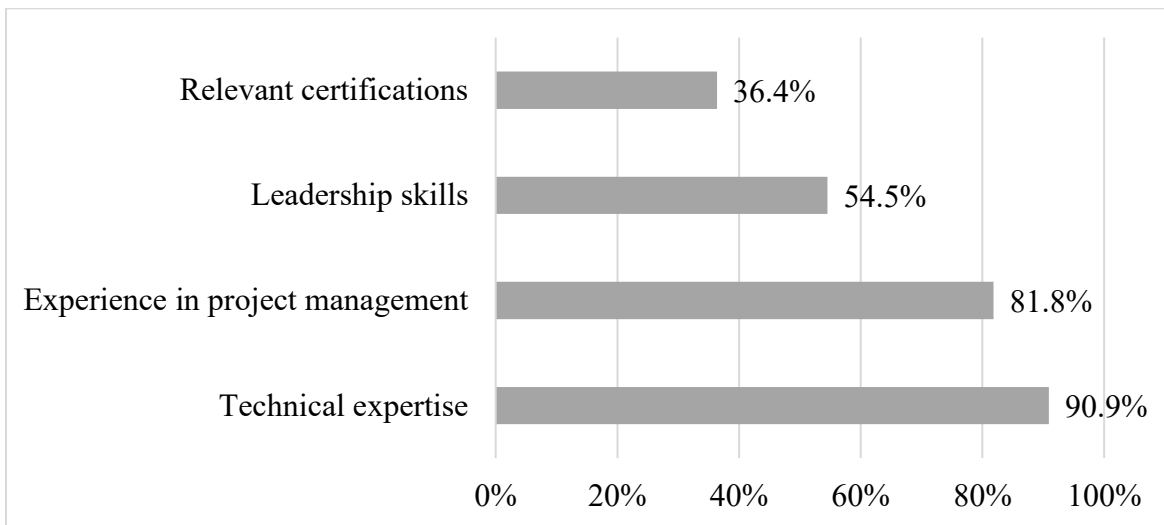


Figure 4.12: A frequency distribution of PMO staffing criteria at CBE

The survey results show that CBE prioritizes technical and industry-specific experience over globally recognized PM qualifications, emphasizing the importance of a balanced approach that includes both technical and structured project management competencies. While CBE has been successful in retaining staff and building internal capacity, the lack of a structured approach to certifications and leadership development may limit the PMO's ability to meet global project management standards.

Comparison with 'accepted practices'

According to CBE's PMO staffing and competency findings, the workforce has strong academic qualifications, with 72.7% of employees holding a master's degree. Recruiters, on the other hand, value hands-on project experience more than formal certifications, with 81.8% preferring it. While this approach emphasizes on-the-ground expertise, it has resulted in a lack of formal requirements for industry-standard certifications such as PMP or PMO-CP, limiting the standardization of

project management methodologies. Potential solutions are identified through comparison to global best practices.

The PMI Talent Triangle (PMI, 2022) emphasizes the need for a balanced skill set in PMO staffing, which includes technical expertise, leadership qualities, and strategic acumen. Furthermore, ISO 21502 (ISO, 2020) and P3M3 (Axelos, 2016) emphasize the benefits of competency-based hiring practices and the significance of industry-recognized certifications in raising professional standards. In accordance with these principles, the ECPMMS:WM-17 emphasizes the project team's competence in construction project management knowledge areas, as well as construction technology-related competencies, practices, and regulations (ECPMI, 2019). Implementing these globally recognized frameworks enables CBE to build a more standardized, strategically aligned, and capable project management workforce.

C. PMO training and capacity building at CBE

Capacity building and training are critical components in improving the effectiveness of PMO. The CBE's project management office provides training programs that emphasize both technical and non-technical skills, with the goal of improving employee competency and professional development. An interviewee, a business analyst at CBE, stated that,

“The PMO's training program includes both technical and personal development modules. Employees can request specialized technical training, while the bank mandates leadership and change management training for all staff.”—Business Analyst, CBE.

This dual training approach ensures that employees gain expertise in specialized project management areas while also developing critical leadership and change management skills for strategic decision-making. However, a significant gap in the PMO's capacity-building efforts is the absence of globally recognized project management certifications such as PMP (Project Management Professional). Currently, no PMO staff members are PMP certified, though short-term PMI-accredited training programs have been introduced. Budget constraints also present significant challenges, limiting the scope and frequency of professional development initiatives.

“Currently, no one in the PMO holds a PMP certification, but we have conducted short-term PMI-certified training sessions to introduce project management principles.” — Business Analyst, CBE.

To bridge this gap, CBE has begun collaborating with the Ethiopian Construction Management Institute (CMI) to facilitate PMI-accredited training and certification programs. Furthermore, the bank's Learning and Development Department conducts regular training needs assessments via online surveys to ensure that the training programs are in line with changing employee needs. Despite these efforts, the absence of structured professional certification programs continues to be a significant challenge for the PMO's competency development.

The survey analysis quantifies the gaps identified in the thematic findings, providing empirical support for the qualitative insights. The survey data analysis findings reveal the following key training need trends:

- While all respondents prioritized project management methodologies, 81.8% considered technical skills to be a critical training area. This supports the interview findings, which show a significant gap in formal project management certifications.
- Leadership development was prioritized by 63.6% of respondents, while soft skills training was preferred by 45.5%.

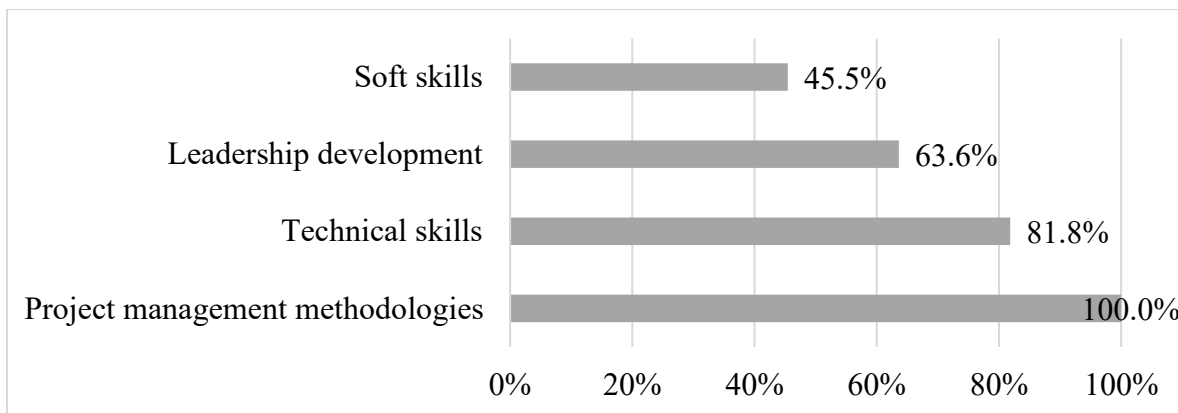


Figure 4.13: A frequency distribution of PMO training focus areas at CBE

Comparison with 'accepted practices'

The findings of training and capacity-building efforts within CBE's PMO highlight several areas for improvement. While technical training opportunities exist, there is a noticeable lack of structured project management certification programs, limiting the adoption of standardized methodologies. Leadership and soft skills training are offered, but they are not systematically prioritized or integrated into larger capacity-building frameworks. Budget constraints can also

present significant challenges, limiting the scope and frequency of professional development programs.

Comparative insights from global best practices can help identify solutions to these problems. The PMBOK (Seventh Edition) and P3O frameworks promote the establishment of structured competency-building programs via globally recognized certification initiatives that ensure a comprehensive development approach (Axelos, 2013; PMI, 2021).

General industry best practices suggest allocating 5-10% of the PMO budget to continuous professional development in order to promote long-term workforce growth. Furthermore, ISO 21502 (ISO, 2020) suggests conducting periodic training needs assessments to keep skills relevant and in line with organizational goals. CBE can enhance both technical and leadership competencies by incorporating these global frameworks into its PMO capacity-building strategy.

D. PMO key drivers and primary roles at CBE

The Commercial Bank of Ethiopia (CBE) established the project management office (PMO) in response to critical business needs for improved project coordination, strategic alignment, and governance oversight. The inception of the CBE Headquarters (HQ) Building Project, a mega project at the national level, was a turning point moment for the establishment of PMO.

Managing such a large-scale project from the client's perspective with traditional project management methodologies presented significant challenges. Because of the HQ project's complexity and scale, a separate project management office was required to effectively oversee its execution. According to one of the project managers:

“A dedicated project management office was required to manage the mega project.”—Project Manager, CBE.

Beyond the HQ project, persistent delays in other ongoing construction projects also contributed to the PMO's establishment. These delays were attributed to poor project execution, decision-making bottlenecks, and the lack of a structured governance mechanism. The PMO was established to address these issues by implementing a structured project management framework that would allow for more efficient project execution and decision-making.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

Additionally, the need for improved project execution efficiency was a key driver. Prior to the establishment of the PMO, construction projects encountered delays in approval processes, a lack of clear accountability, and ineffective stakeholder coordination. The structured PMO framework aimed to streamline project planning, execution, and monitoring, ensuring that projects were completed on time and within budget.

Another important factor was the alignment of project management with CBE's strategic goals. Prior to the establishment of the PMO, project implementation frequently deviated from the bank's overall institutional direction. The PMO's integration into CBE's organizational structure made project outcomes more aligned with the bank's long-term goals.

The survey results strongly support the insight from the preliminary study and thematic study findings, which show that CBE's PMO was established primarily to optimize resource allocation and sharing (with 90.9% of respondents) and alignment of project goals with strategic objectives (with 81.8% of respondents) agreeing on its significance. Other key drivers include:

- Improving organizational performance (72.7%), implying that the PMO is viewed as a tool for improving operational efficiency.
- Improvements in project visibility and reporting (63.6%) indicate that project tracking and evaluation should be more transparent.
- Standardization of project management methodologies (54.5%), indicating an effort to introduce consistency in project execution.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*



Figure 4.14: A frequency distribution of PMO key drivers at CBE

According to the survey results, the most important role of the PMO is project coordination, with 90.9% of respondents recognizing its effectiveness in ensuring stakeholder collaboration. 81.8% of respondents identified support and facilitation as main functions for assisting various departments in successfully completing projects. Governance and oversight were identified by 63.6% of respondents as crucial PMO roles in establishing accountability and compliance. Although strategic alignment received less attention (45.5%), it is still important for ensuring that projects are consistently aligned with broader institutional goals.

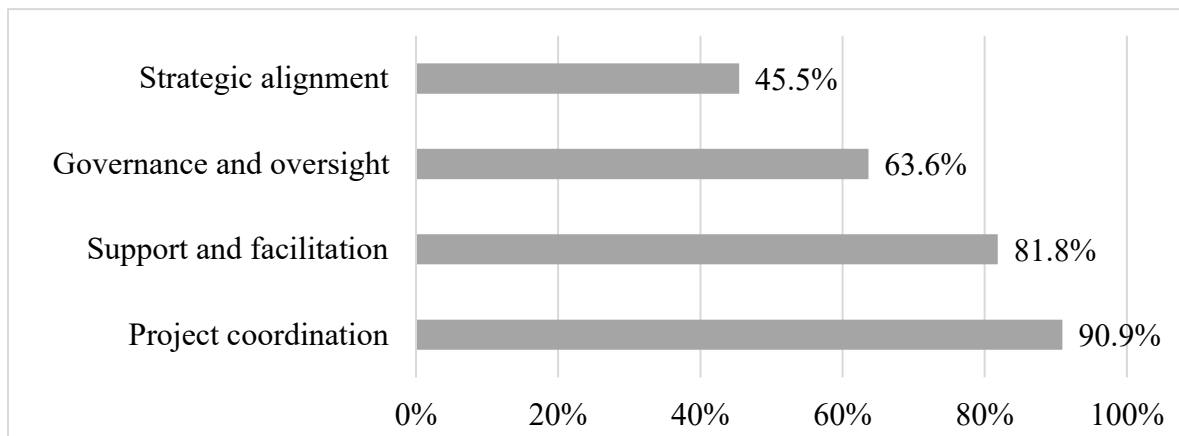


Figure 4.15: A frequency distribution of PMO primary roles at CBE

E. PMO challenges and effectiveness at CBE

The CBE's PMO was initially established as a temporary project office to speed up decision-making during the CBE Headquarters Building Project. However, following the successful completion of the project, the PMO was formally integrated into the bank's organizational structure as the Building Construction Management Department.

This strategic shift allowed the PMO to oversee branch expansion projects such as the CBE Nifas Mewcha and CBE Estie branches, which were completed as part of the bank's smart branch initiative. One interviewee in a senior management position stated that,

“The project office's role in managing the headquarters project led to its formal integration. This shift enabled the PMO to take the lead in branch expansion projects, achieving rapid execution timelines.”—Director, CBE.

While the transition has institutionalized the PMO, there are still issues, particularly with decision-making efficiency. During its early stages, the PMO reported directly to the bank's president, bypassing the hierarchical structure. This direct oversight has accelerated the approval process and reduced delays. However, as the PMO evolved into a permanent functional department, decision-making reverted to standard bureaucratic procedures, causing delays in project approval and execution.

Furthermore, external challenges such as price escalation, currency devaluation, and inflation continue to impact project budgets and timelines. These macroeconomic factors pose significant

risks, but the PMO lacks a formal risk management strategy to mitigate their impact. As stated by one of the senior staff members,

“The lack of a proactive risk management strategy has made it difficult for the PMO to respond effectively to external challenges such as inflation and currency fluctuations.”—Senior Staff, CBE.

These issues highlight the need for better governance mechanisms, streamlined decision-making processes, and proactive risk management frameworks to ensure the PMO's continued success in delivering large-scale projects.

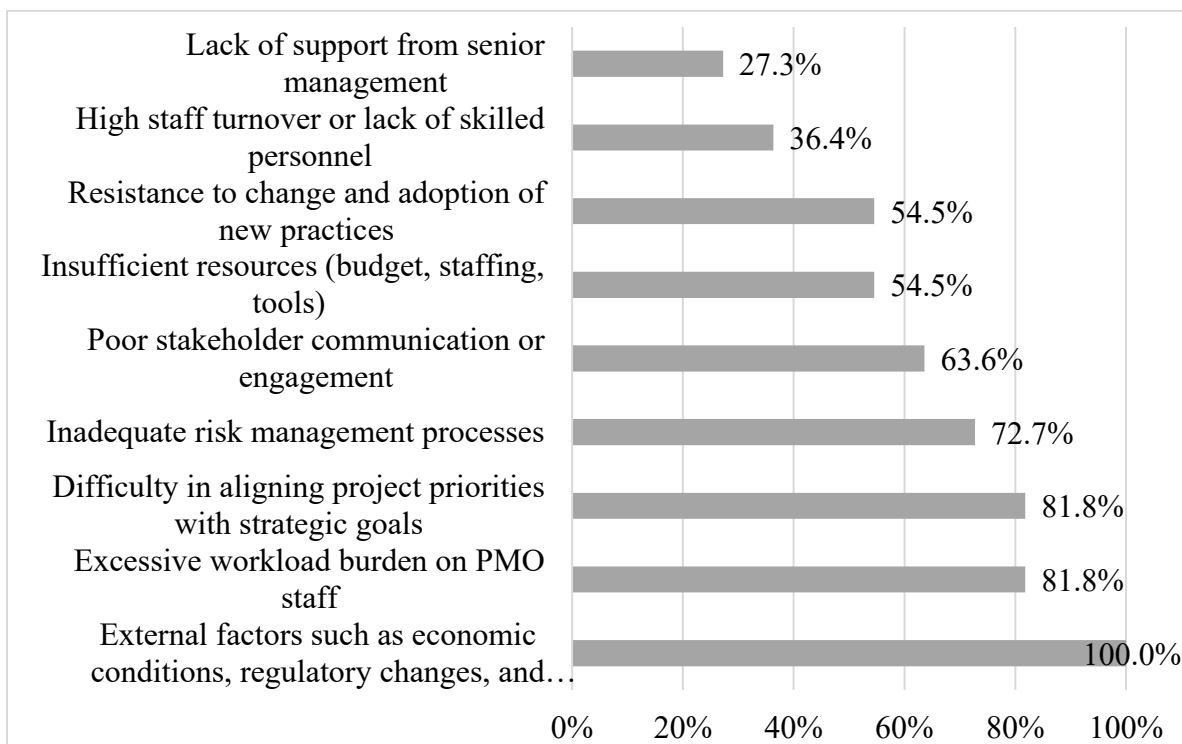


Figure 4.16: A frequency distribution of PMO's major challenges at CBE

The survey results supplement the thematic analysis insights by highlighting major challenges faced by the PMO. External factors, such as economic and regulatory changes, are among the most frequent challenges faced by the PMO, with 100% of respondents agreeing on this. Other major challenges include:

- Excessive workload burden on PMO staff (81.8% of respondents)
- Difficulty in aligning project priorities with strategic goals (81.8%)
- Inadequate risk management processes (72.7%)

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

- Poor stakeholder communication and engagement (63.6%)
- Insufficient resources (budget, staffing, tools) (54.5%).

Furthermore, 54.5% of respondents identified resistance to change and the adoption of new project management practices as a major concern.

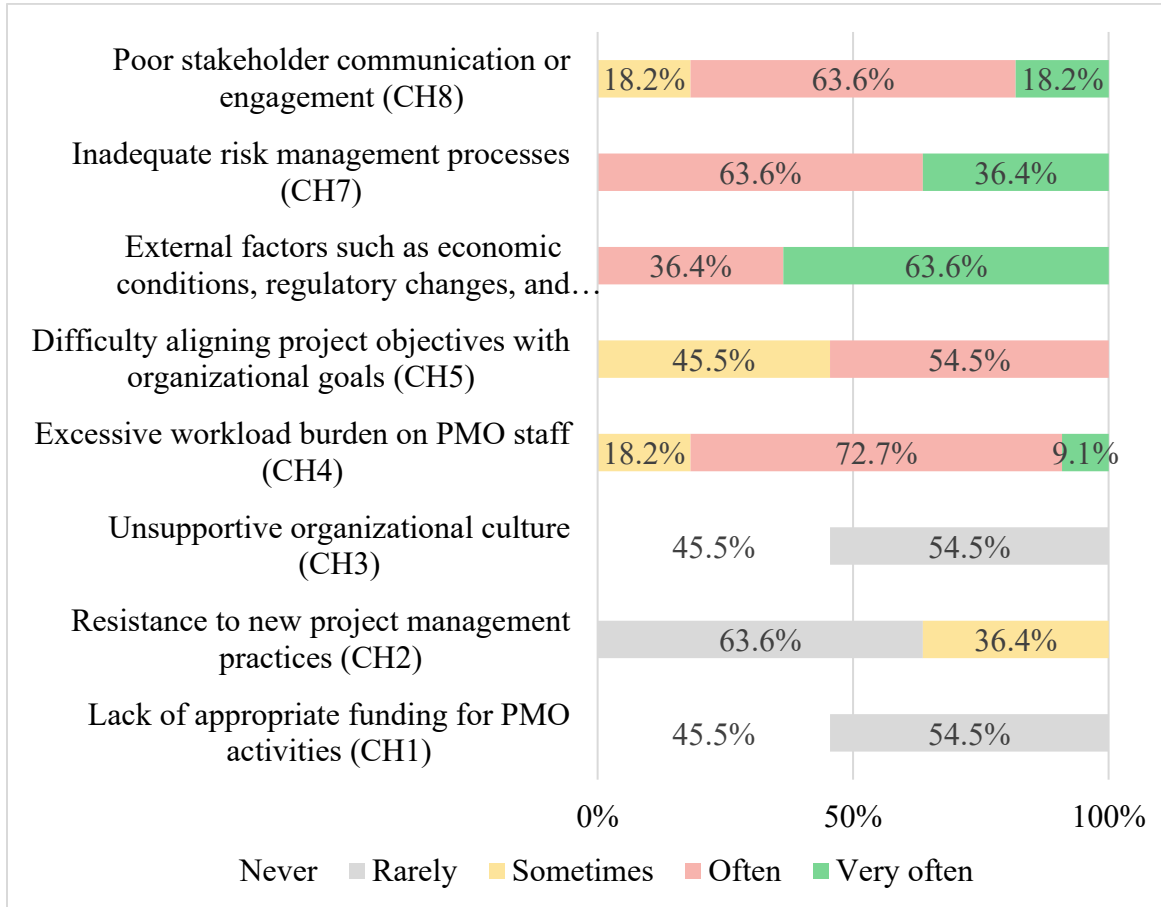


Figure 4.17: A frequency distribution of PMO's major challenges at CBE on 5-point Likert scale

Comparison with 'accepted practices'

The findings on challenges and effectiveness within CBE's PMO identify several factors hindering the organization's operational and strategic capabilities. Excessive workloads significantly reduce the PMO's efficiency, limiting its capacity to manage projects effectively. External factors, combined with the lack of a formal risk management framework, have resulted in a reactive rather than proactive risk mitigation strategy, exposing projects to avoidable risks. Furthermore,

communication gaps with stakeholders’ complicate coordination efforts, especially in large-scale projects, causing delays and misaligned expectations.

Global best practice insights provide actionable strategies for addressing these challenges. The Risk management guideline of ISO 31000 (ISO, 2018) promotes the establishment of structured risk assessment mechanisms, allowing PMOs to anticipate and mitigate risks proactively. The PMBOK Guide (PMI, 2021) recommends implementing stakeholder engagement frameworks to improve communication and project coordination. Meanwhile, PRINCE2 (Axelos, 2015) emphasizes the importance of workflow optimization strategies in reducing excessive workloads and improving overall operational efficiency. Incorporating these best practices can assist CBE in improving its PMO's operational effectiveness, risk management capabilities, and stakeholder alignment.

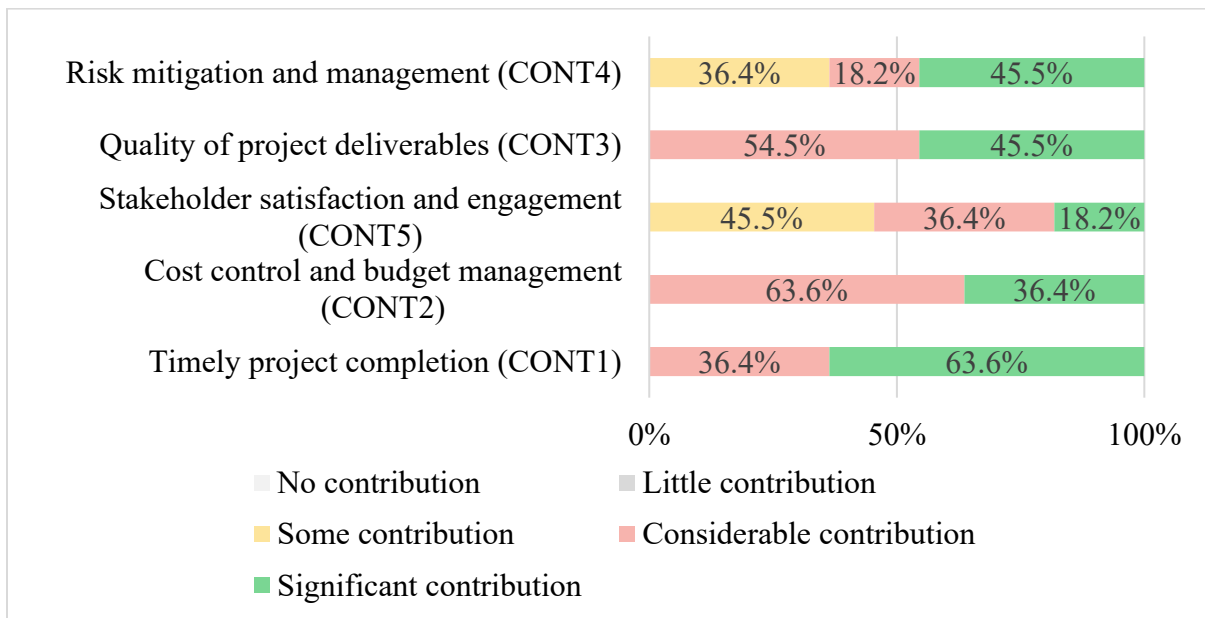


Figure 4.18: A frequency distribution of PMO’s contribution at CBE on 5-point Likert scale

Moreover, the Likert-scale analysis provides a structured assessment of the PMO’s challenges, contributions, and overall effectiveness at CBE. The PMO's challenges received an overall mean score of 3.24, with frequent operational issues such as external factors, excessive workload, difficulty aligning project priorities with strategic goals, and ineffective risk management necessitating targeted interventions.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

Despite these challenges, the PMO's contributions received a rating of 4.25—*significant contribution*—indicating a significant positive impact on cost control, timely project completion, and resource optimization. Furthermore, the PMO's overall effectiveness was rated at 4.73—*highly effective*—confirming its strong performance while emphasizing the need for continuous improvement in addressing operational challenges, which were identified as critical issues. Addressing these challenges and strengthening key areas will improve the PMO's long-term sustainability and effectiveness in meeting CBE's strategic goals.

Table 4.6: Descriptive statistics of PMO [challenges, contribution and effectiveness] at CBE

<i>Constructs/variables</i>	<i>Codes</i>	<i>Overall mean score</i>	<i>Standard devi.</i>	<i>Agreement degree</i>	<i>Interpretation</i>
<i>PMO challenges</i>	CHs	3.24	0.04	Sometimes	
<i>PMO contributions</i>	CONTs	4.25	0.10	Significant Contribution	
<i>PMO effectiveness</i>	EFFs	4.73	0.14	Highly Effective	

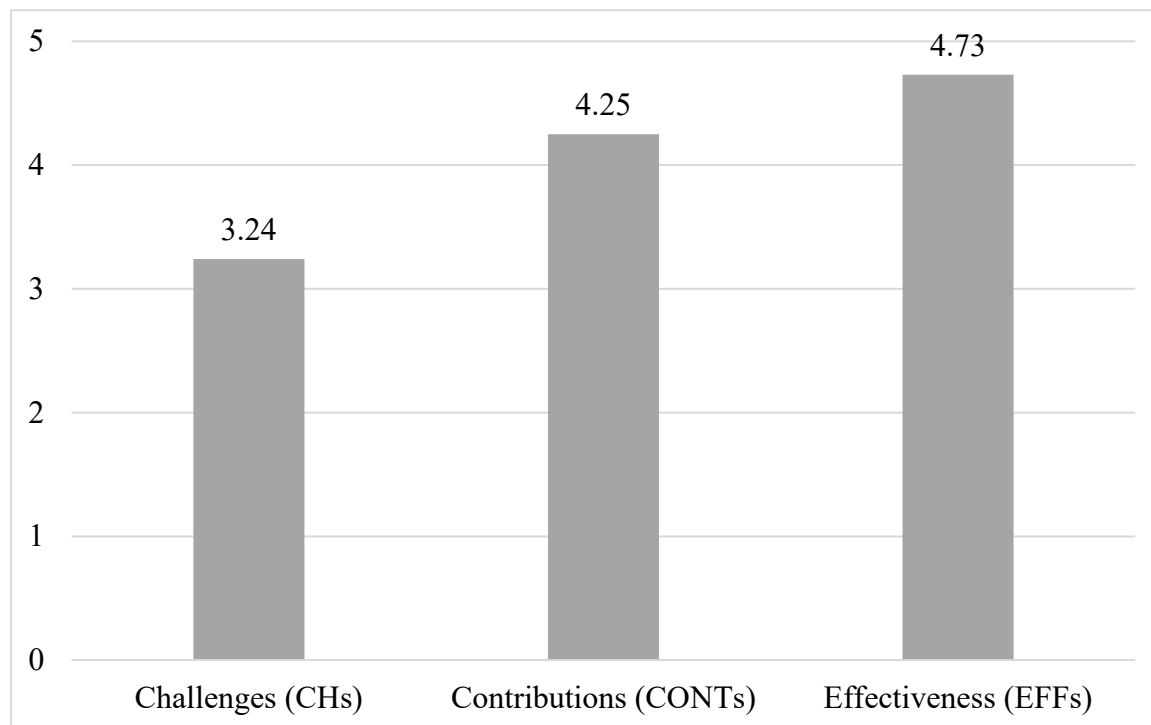


Figure 4.19: CBE's PMO [challenges, contribution and effectiveness] on 5-point Likert scale

F. PMO improvement areas and future outlook at CBE

The procedural rigidity of CBE's banking structure has significantly impacted the effectiveness of its Project Management Office (PMO), particularly concerning time extensions and price escalations. These bureaucratic challenges have led to delays in decision-making, often creating opportunities for contractors to intentionally slow down construction activities.

One of the interviewees in a senior management position at CBE emphasized the importance of having an in-house construction management team to help mitigate such delays. The successful completion of smart branch office buildings within three months through outsourced contractors suggests that, with enhanced internal capacity, similar projects could be managed efficiently by the department. However, while internal execution offers greater control and efficiency, there is a strategic concern that over-involvement in construction management could shift CBE's focus away from its core banking operations.

Conclusion and recommendations

The Commercial Bank of Ethiopia (CBE) case study reveals both strengths and weaknesses in the effectiveness of its project management office (PMO) in managing large-scale construction projects. The PMO has a well-defined structure, including specialized units for quality management, contract administration, and lease management, as well as a highly qualified workforce, with 72.7% holding master's degrees and a significant portion having more than 15 years of experience.

Despite these benefits, bureaucratic inefficiencies and a lack of enterprise-level governance limit its strategic influence. The lengthy approval processes required for time extensions and cost escalations have resulted in project delays, reducing overall execution efficiency. While the PMO has employed competency-based staffing, the emphasis on technical expertise over standardized project management certifications, such as PMP and PMO-CP, has limited the adoption of global best practices.

While training programs exist, they are budget-constrained and lack structured professional development pathways. In addition, excessive workloads, ineffective stakeholder engagement, and

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

inadequate risk management frameworks expose projects to external financial risks such as inflation. Despite these challenges, the PMO has made significant contributions to cost control, timely project completion, and resource optimization. Addressing governance and operational gaps through globally recognized methodologies is critical to the organization's long-term viability.

Several strategic measures should be implemented to improve the PMO's governance and operational effectiveness. First, transitioning the PMO to an enterprise-level governance model aligned with the PMBOK (Seventh Edition) and P3O frameworks will improve strategic oversight and decision-making efficiency (Axelos, 2013; PMI, 2021). Streamlining approval procedures and reducing bureaucratic inefficiencies will improve responsiveness, especially in terms of time extensions and cost escalations.

Furthermore, developing structured hiring criteria that balance practical experience with industry-wide recognized certifications (such as PMP and PMO-CP) will standardize project management methodologies and align staff competencies with global standards. Formal training programs should be expanded, with at least 5-10% of the PMO budget allocated to continuous professional development, including technical, strategic, and leadership training. Improving stakeholder engagement through the PMBOK (PMI, 2021) stakeholder engagement framework improves project team collaboration and coordination. In addition, optimizing resource allocation and digitizing contract management processes will reduce workloads and improve operational efficiency.

Finally, implementing ISO 31000 (ISO, 2018) risk management principles will create proactive risk assessment mechanisms, reducing financial and external market risks. Implementing these targeted improvements will enable the CBE's PMO to strengthen its strategic role, improve governance structures, and maximize project execution efficiency, ensuring long-term success and institutional alignment.

4.2.3. The case study of Ethiopian Electric Utility (EEU)

Although this study provides a broad overview of project management office (PMO) practices at EEU, the discussion primarily focuses on the CCMPO⁹. For consistency, the CCMPO may be interchangeably referred to as the PMO throughout the discussion.

Demographic characteristics of EEU survey respondents

Understanding the demographic composition of respondents in EEU's project management office (PMO) provides insights into workforce composition and the potential implications for project management effectiveness. Respondents' educational qualifications show a well-qualified workforce, with 66.7% holding a bachelor's degree and 33.3% holding a master's degree. This indicates that the workforce is academically qualified, implying a solid theoretical foundation in project management and other fields. Academic qualifications alone do not guarantee successful project execution; practical experience and specialized training are also required.

In terms of professional experience, 55.6% of respondents have between 5 and 10 years of project management experience, 33.3% have more than 15 years, and 11.1% have less than five. The predominance of mid-to-senior-level professionals indicates a solid foundation for project governance and execution. However, the low proportion of respondents with less than 5 years of experience may reflect a high staff turnover rate among early-career professionals, limiting the adoption of innovative practices and modern project management methodologies.

The majority of respondents (77.8%) are directly involved in PMO functions as PMO managers or PMO staff, with the remainder being Project managers (11.1%) and Functional managers (11.1%). This concentration of PMO-specific roles suggests that the organization has a well-established PMO framework in place, with dedicated project governance and execution staff. Overall, the workforce's educational qualifications and extensive project management experience suggest that it is capable of implementing structured PMO practices.

⁹ The findings and discussions specifically pertain to the Civil Construction Management Program Office (CCMPO) rather than the entire PPMD structure.

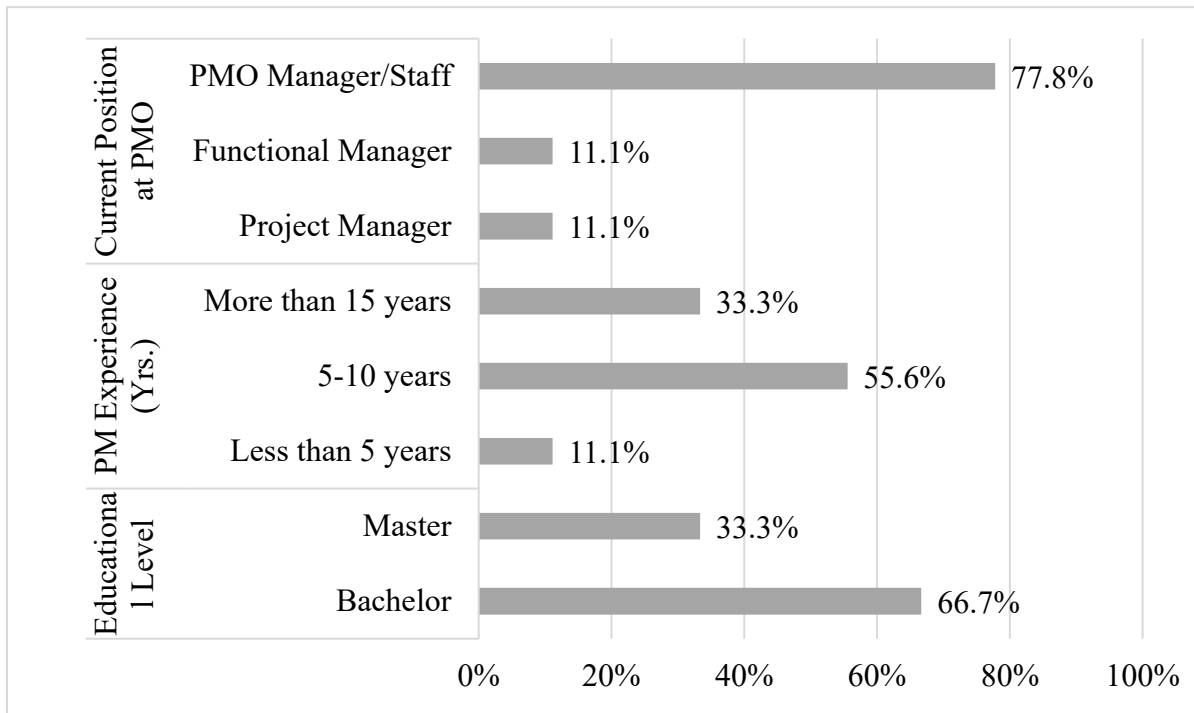


Figure 4.20: Demographic characteristics of EEU's survey respondents

Discussion of thematic findings and comparison with 'accepted practices'

A. PMO structure and governance at EEU

The Ethiopian Electric Utility (EEU) restructured its project management function by establishing a Project Portfolio Management Directorate (PPMD), which reports directly to the CEO. The PPMD directs several program offices, including the Civil Construction Management Program Office (CCMPO), the ICT Projects Program Office, and the Electric Distribution Infrastructure Projects Program Office. This structure allows EEU to align its projects with strategic goals while ensuring resource coordination and decision-making efficiency. Direct reporting to the CEO enables strategic oversight, resource coordination, and timely decision-making, reducing bureaucratic inefficiencies and improving project execution.

Despite these structural advantages, several challenges persist, particularly staffing and communication inefficiencies. These staffing issues lead to operational inefficiencies, project delays, and weakened institutional capabilities. Interdepartmental communication presents another

significant governance challenge. Bureaucratic inefficiencies and a lack of structured collaboration mechanisms limit the PMO's ability to coordinate effectively across departments.

A functional manager at EEU highlighted this issue, stating,

“Communication gaps between departments slow decision-making and create operational challenges.”—Functional Manager, EEU.

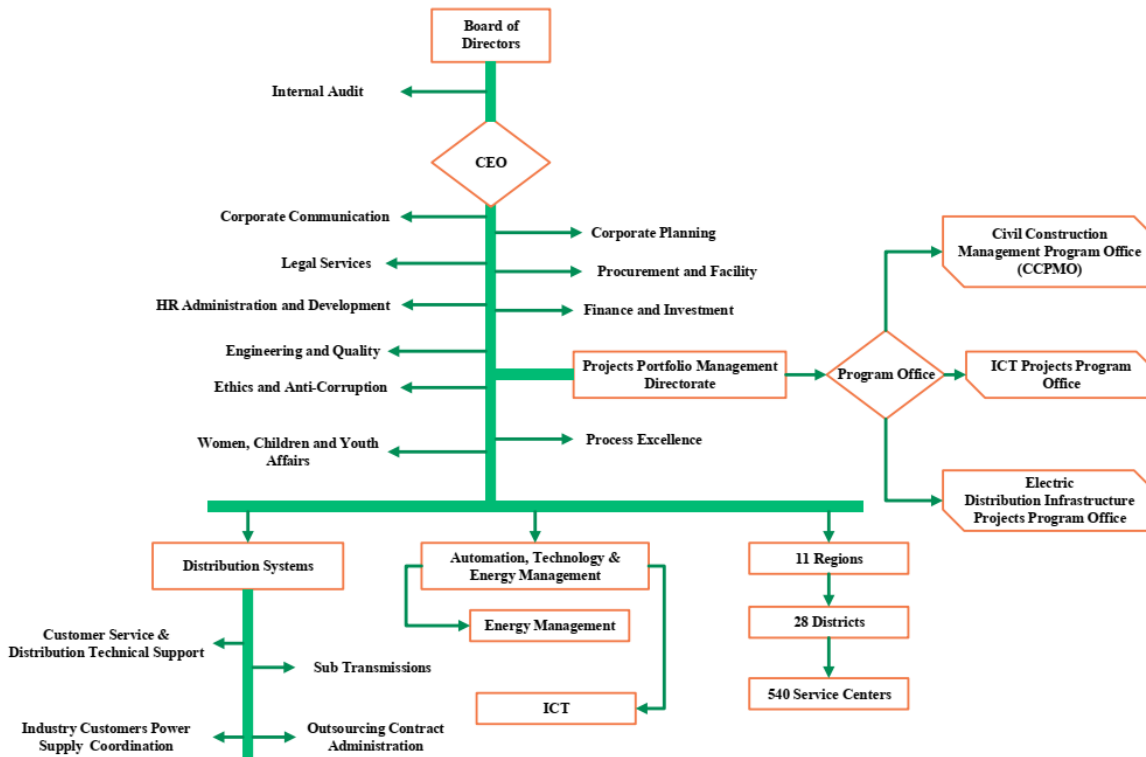


Figure 4.21: An overview of the PPMO/PO's organizational structure at EEU

According to survey findings, the EEU's project management office (PMO) operates at the executive level and has been in place for more than a decade. Despite its strategic position, the PMO faces numerous internal challenges that limit its overall effectiveness. Major issues include high staff turnover, a lack of competency-based staffing, inadequate structured training programs, and poor interdepartmental coordination. Addressing these issues is critical for the PMO's ability to effectively manage projects and align them with organizational goals.

Table 4.7: A Summary of PMO size, level of influence, and years of operation at EEU

PMO Influence Level	Executive level
PMO in Operation (Yrs.)	More than 10 years
PMO Size (Employees)	0-14 employees (existing)

Comparison with ‘accepted practices’

The findings show that EEU's structure and governance model are similar to mature enterprise-level PMOs, ensuring that project portfolios contribute directly to the organization's vision. Although the PMO operates at the executive level, its effectiveness is limited by bureaucratic inefficiencies that cause critical decision-making processes to be delayed. Staff turnover and frequent reshuffles exacerbate the loss of institutional knowledge, further compromising governance stability. Communication gaps also hinder interdepartmental collaboration, leading to project delays and misalignment.

Comparative insights from global best practices provide clear strategies for resolving these challenges. The PMBOK Guide (Seventh Edition) suggests implementing structured governance frameworks to reduce procedural inefficiencies and streamline decision-making (PMI, 2021). The P3O framework (Axelos, 2013) emphasizes governance resilience strategies to ensure PMO autonomy and continuity during leadership transitions. Furthermore, ISO 21502 (ISO, 2020) suggests decentralized project governance models with effective reporting structures to accelerate decision-making while maintaining accountability. Integrating these frameworks allows the PMO to create a more agile, collaborative, and strategically aligned governance model.

B. PMO staffing and competency at EEU

The Ethiopian Electric Utility (EEU) has established an independent Project Portfolio Management Directorate (PPMD) with its own Human Resources (HR) unit in charge of staffing. The PPMD staffs in accordance with each program office's approved recruitment plan, particularly for the CCMPO, which meets project requirements. Despite the structured recruitment process, staff retention remains a significant challenge. A senior staff member emphasized that,

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

“Most PMO staff were selected based on their prior experience within the organization rather than their expertise in project management, which has created competency gaps.” —Senior Staff, EEU.

The staffing composition includes professionals with varying levels of experience, ranging from junior employees (less than a year) to senior staff (more than 36 years of experience). Furthermore, the PMO experiences high staff turnover, indicating dissatisfaction with compensation and career advancement opportunities. This high turnover has resulted in staff instability, supporting the claim that the PMO is unable to retain skilled project managers, disrupting project execution and institutional knowledge retention. As one HR representative mentioned,

“Many employees leave due to lower salary scales than other industries.” —HR, EEU.

The lack of structured training programs and competency-based staffing exacerbates these issues. One critical issue is that some employees are transferred from unrelated departments without project management experience, resulting in inefficiencies in project execution. A director-level interviewee elaborated,

“Some PMO staff who transferred from other departments lack project management experience and demonstrate an operational mindset rather than a project mindset.” —Director, EEU.

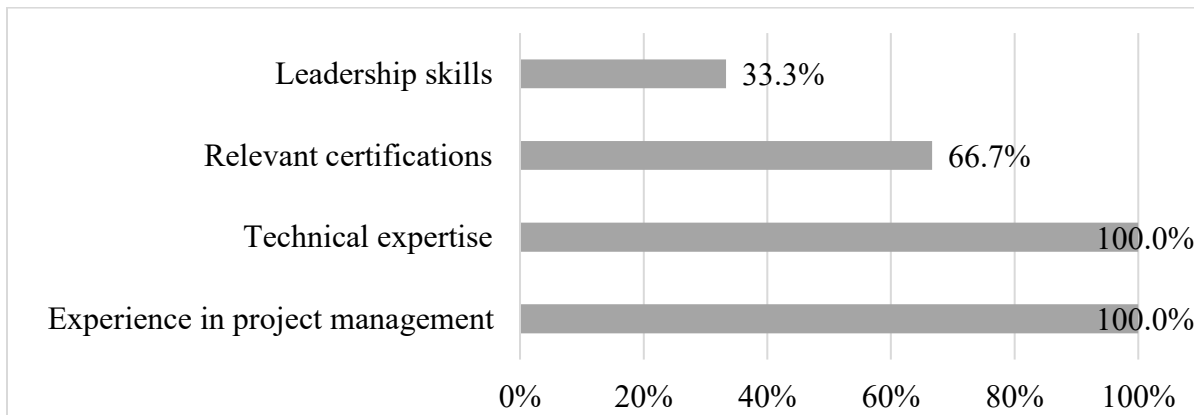


Figure 4.22: A frequency distribution of PMO staffing selection criteria at EEU

The survey results complement the qualitative findings from the thematic analysis. Respondents reported that technical expertise (100%) and project management experience (100%) are the primary criteria for staffing decisions, while formal certifications (66.7%) and leadership skills (33.3%) are given significantly less weight. According to the survey findings, EEU's PMO hiring

strategy prioritizes experience and technical expertise over leadership and strategic management skills, both of which are required for an effective PMO.

Comparison with ‘accepted practices’

The analysis of PMO staffing and competency identified critical issues that affect the PMO's effectiveness and professionalism. A strong emphasis on experience over formal certifications during the hiring process has resulted in a low adoption of standardized project management methodologies. Unsatisfactory salary scales and a lack of career growth opportunities all contribute to high staff turnover, exacerbating staff instability and development. Competency gaps are evident, as employees are frequently transferred from unrelated departments to the PMO, limiting specialized expertise.

Global best practices offer actionable solutions to these issues. The PMI Talent Triangle (PMI, 2022) promotes a balanced emphasis on technical skills, leadership skills, and strategic business acumen, ensuring that PMO staff have a diverse skill set. ISO 21502 (ISO, 2020) and P3M3 (Axelos, 2016) both place an emphasis on competency-based hiring practices, which are supplemented by structured certification requirements, to foster a standardized and professional workforce. The ECPMMS:WM-17 also emphasizes the project team's competency in construction project management knowledge areas, as well as construction technology-related competencies, practices, and regulations (ECPMI, 2019). Following these global frameworks enables the PMO to cultivate a more skilled, stable, and strategically aligned workforce capable of driving organizational success.

C. PMO training and capacity building at EEU

Capacity building and training play a crucial role in enhancing the effectiveness of project management offices. Training programs at EEU are primarily facilitated by the Project Portfolio Management Directorate (PPMD) for program offices within its structure, as well as the HR Administration and Development Directorate for all employees at the organizational level. The PPMD focuses on project management training, whereas the HR Administration and Development Directorate offers broader training programs, often in collaboration with the Ethiopian Management Institute (EMI).

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

Despite these efforts, there is still a significant gap in providing structured project management training to PMO staff. As one senior staff member stated,

“The majority of the training programs are general and do not adequately address the specific competencies required for project management.”—Senior Staff, EEU.

This interviewee’s concern underscores a misalignment between training content and the practical needs of PMO staff, potentially affecting project execution efficiency. Additionally, the frequency and regularity of training sessions remain a concern. One functional manager explained,

“We often go years without receiving project management training, which limits our ability to keep up with changing industry standards and best practices.”—Functional Manager, EEU.

This interviewee's concern demonstrates that PMO staff do not receive consistent and structured professional development opportunities. This lack of regular training prevents staff from gaining up-to-date project management skills, ultimately affecting the efficiency of PMO project implementation.

Another critical gap is the lack of post-training feedback mechanisms and performance assessments. Organizations that follow best practices in capacity building initiatives typically use post-training assessments to assess the effectiveness of training programs and ensure that learning leads to better performance. However, at EEU, there is no structured process in place to assess the impact of training programs on employee competencies and project outcomes. Without such evaluation mechanisms, it is difficult to improve training programs and align them with organizational needs.

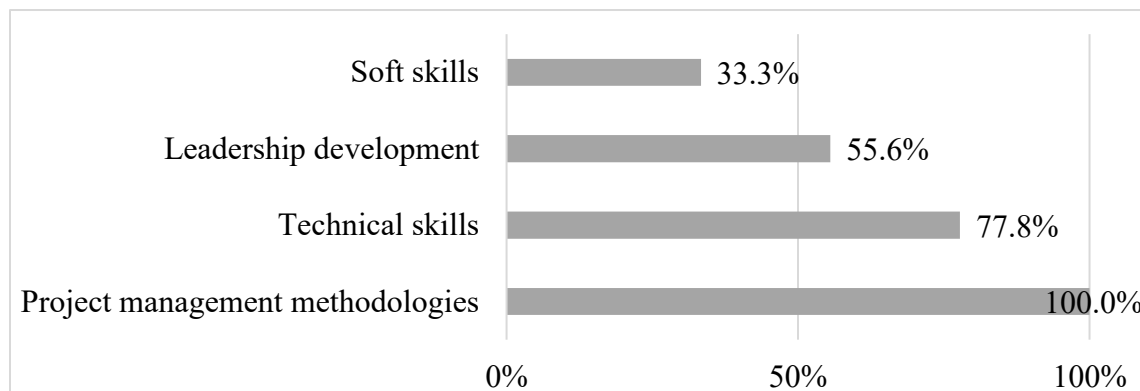


Figure 4.23: A frequency distribution of PMO training focus areas at EEU

The survey findings support the thematic analysis, highlighting critical gaps in EEU's PMO capacity-building initiatives. A significant number of survey participants (100% of respondents) identified project management methodologies as a key training priority, emphasizing the need for structured and role-specific training programs.

Furthermore, 77.8% of respondents identified technical skills as an important training area. Beyond technical skills, 55.6% of respondents prioritized leadership training, while 33.3% identified soft skills training as a key area for improvement. These survey findings are consistent with the qualitative insights from the thematic analysis, supporting the conclusion that EEU's PMO lacks a structured, competency-based training approach.

Comparison with 'accepted practices'

Training and capacity-building efforts within EEU's PMO have identified several areas for improvement. Current training programs are not aligned with the practical needs of PMO staff, which may have an impact on project execution efficiency. In other words, there are no formal certification programs, which limits the PMO's ability to effectively implement standardized project management methodologies. Budget constraints limit the scope and frequency of capacity-building initiatives, which impedes long-term professional development. Furthermore, the absence of formal post-training feedback mechanisms prevents the organization from assessing skill development and ensuring training objectives are met.

Global best practices provide comparative insights and specific strategies for overcoming these challenges. The PMBOK (PMI, 2021) and P3O (Axelos, 2013) frameworks promote structured competency-building programs with internationally recognized certifications, promoting overall skill development and methodological alignment. ISO 21502 (ISO, 2020) emphasizes the value of structured learning pathways and continuous professional development initiatives in keeping the workforce relevant and adaptable. General industry best practices suggest allocating 5-10% of the PMO budget to training investments, ensuring adequate resources for ongoing capacity development. By incorporating these practices, the PMO can create a solid, long-term framework for workforce development and training effectiveness.

D. PMO key drivers and primary roles at CBE

EEU established the Project Portfolio Management Directorate (PPMD) to address fragmented project management practices, optimize resource allocation, and improve centralized oversight. Previously, projects such as IT initiatives, energy distribution infrastructure, and civil works were managed separately, resulting in operational inefficiencies and inconsistencies. According to a senior management interviewee,

“EEU runs and administers different nature projects as an organization... There was a gap in organizing and managing similar nature projects under one program.”—Director, EEU.

The lack of an integrated governance structure made it difficult to align projects with organizational goals, necessitating the formation of the PMO to standardize processes and improve coordination.

Another key motivator for establishing the PMO was the need for centralized resource management. Prior to the PMO, various departments allocated financial, human, and material resources independently, resulting in frequent misallocation and competition for limited budgets. As one director-level interviewee stated,

“Resource allocation was fragmented, with different departments competing for limited budgets and skilled personnel.”—Director, EEU.

The PMO introduced a structured approach to resource allocation, ensuring that priority projects received adequate funding and personnel while reducing inefficiencies and unnecessary costs.

Additionally, the absence of a structured project oversight mechanism hindered effective monitoring and accountability. Without a centralized office, project performance was not consistently tracked, and there was no systematic approach to identifying challenges and implementing corrective actions. A functional manager emphasized that,

“Before the PMO, project tracking was unstructured, making it difficult to enforce accountability and ensure timely completion.”—Functional Manager, EEU.

As a result, the PMO implemented a central monitoring system to improve executive project governance, risk management, and data-driven decision-making.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*



Figure 4.24: A frequency distribution of PMO key drivers at EEU

The survey results support the thematic analysis, confirming that EEU's Project Portfolio Management Directorate (PPMD) was primarily established to optimize resource allocation and align project goals with strategic objectives, with 100% of respondents identifying these as key drivers. 88.9% of respondents also identified other critical factors, such as improving project visibility and reporting, improving organizational performance, and standardizing project management methodologies.

According to the survey results, the most important role of the PMO is project coordination, with 100% of respondents recognizing its effectiveness in ensuring stakeholder collaboration. Support and facilitation were identified as PMOs' second crucial role, with 88.9% of respondents recognizing their contribution to assisting departments with project implementation. Strategic alignment is another important role of PMOs, with 77.8% acknowledging the PMO's ability to

align project goals with overall institutional objectives. Although governance and oversight received less attention (44.4%), they are still important for executive project governance and should be improved.

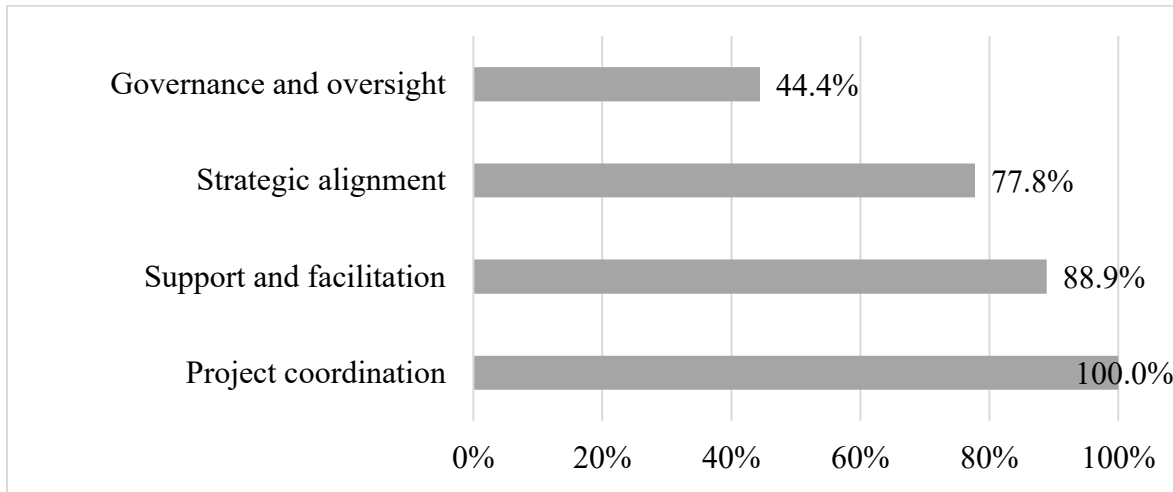


Figure 4.25: A frequency distribution of PMO primary roles at EEU

E. PMO challenges and effectiveness at EEU

EEU reorganized its project management office (PMO), formerly known as the Technology Excellence Center of Construction Projects, into the Civil Construction Management Program Office (CCMPO) to address operational inefficiencies and improve strategic oversight. This transformation elevated the PMO to the directorate level, granting it autonomy in finance, logistics, human resources, and procurement. The restructuring was intended to improve decision-making power, project execution, and organizational alignment with strategic goals.

As one key informant interviewee mentioned,

“The program office (PMO) is more effective when it is self-contained, with its own finance, logistics, human resources, procurement, and full decision-making authority.”—Functional Manager, EEU.

While this shift resulted in a clearer delegation of authority, persistent staffing and interdepartmental coordination issues continue to limit the PMO's effectiveness.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

One of the most significant challenges facing the PMO is frequent staff reshuffling, which has resulted in the reassignment of employees lacking project management expertise. This has led to project delays, inefficiencies, and diminished institutional capabilities.

Moreover, high staff turnover due to a low salary scale and limited career growth opportunities has exacerbated instability, making it difficult to retain experienced employees. The lack of structured training programs and competency-based staffing exacerbates the problem, resulting in skill gaps within the PMO. An HR representative stated that,

“Many employees leave due to lower salary scales than other industries.”—HR, EEU.

Beyond staffing issues, interdepartmental communication gaps and bureaucratic inefficiencies hinder collaboration and timely decision-making. The lack of structured coordination mechanisms prevents the PMO from effectively managing projects across departments. As one functional manager stated,

“Communication gaps between departments slow down decision-making and create operational challenges.”—Functional Manager, EEU.

These issues highlight the need for EEU to prioritize competency-based staffing, structured training programs, and career progression frameworks, as well as improve communication and collaboration.

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

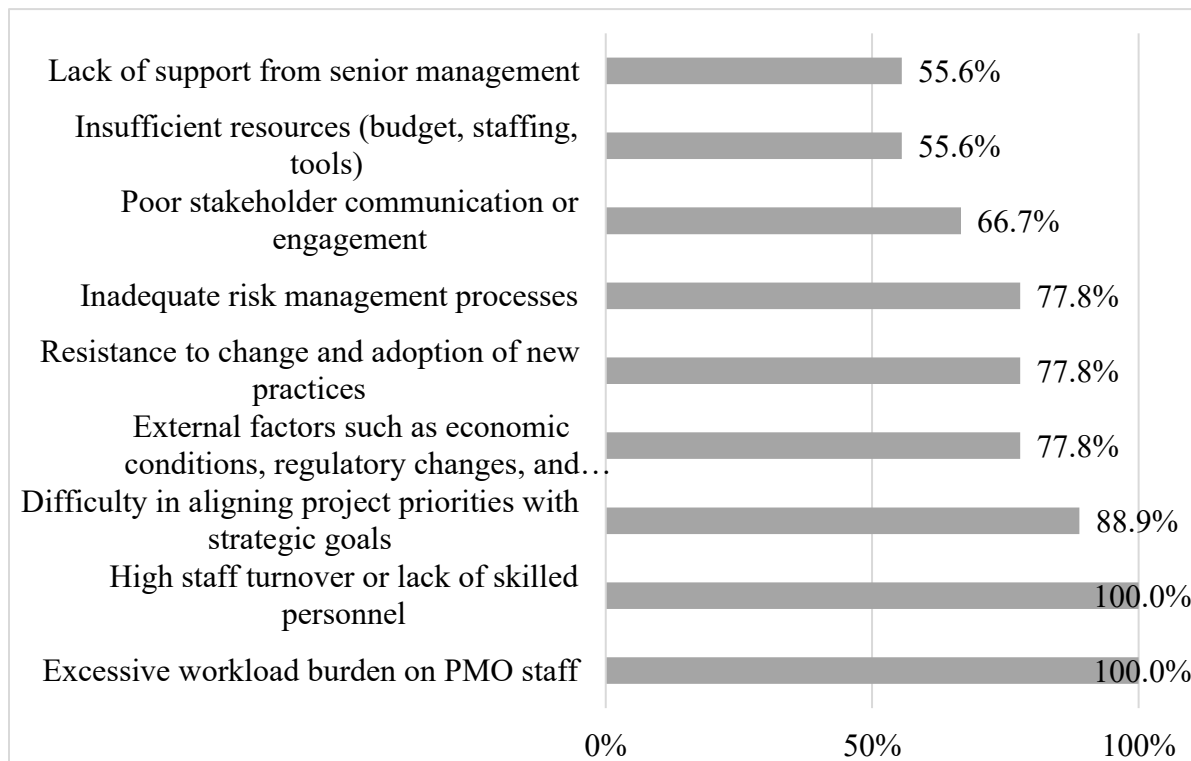


Figure 4.26: A frequency distribution of PMO's major challenges at EEU

The survey results supplement the findings from thematic analysis by highlighting major challenges faced by the PMO. Excessive workload burden on PMO staff and high staff turnover are two of the most common challenges facing the PMO, with 100% of respondents agreeing. Other major challenges include:

- Difficulty in aligning project priorities with strategic goals (88.9%)
- External factors such as economic conditions, regulatory changes, and industry trends (77.8%)
- Resistance to change and the adoption of new project management practices (77.8%)
- Inadequate risk management processes (77.8%)
- Poor stakeholder communication and engagement (66.7%)

Furthermore, 54.5% of respondents reported insufficient resources (budget, staffing, and tools) as a major issue.

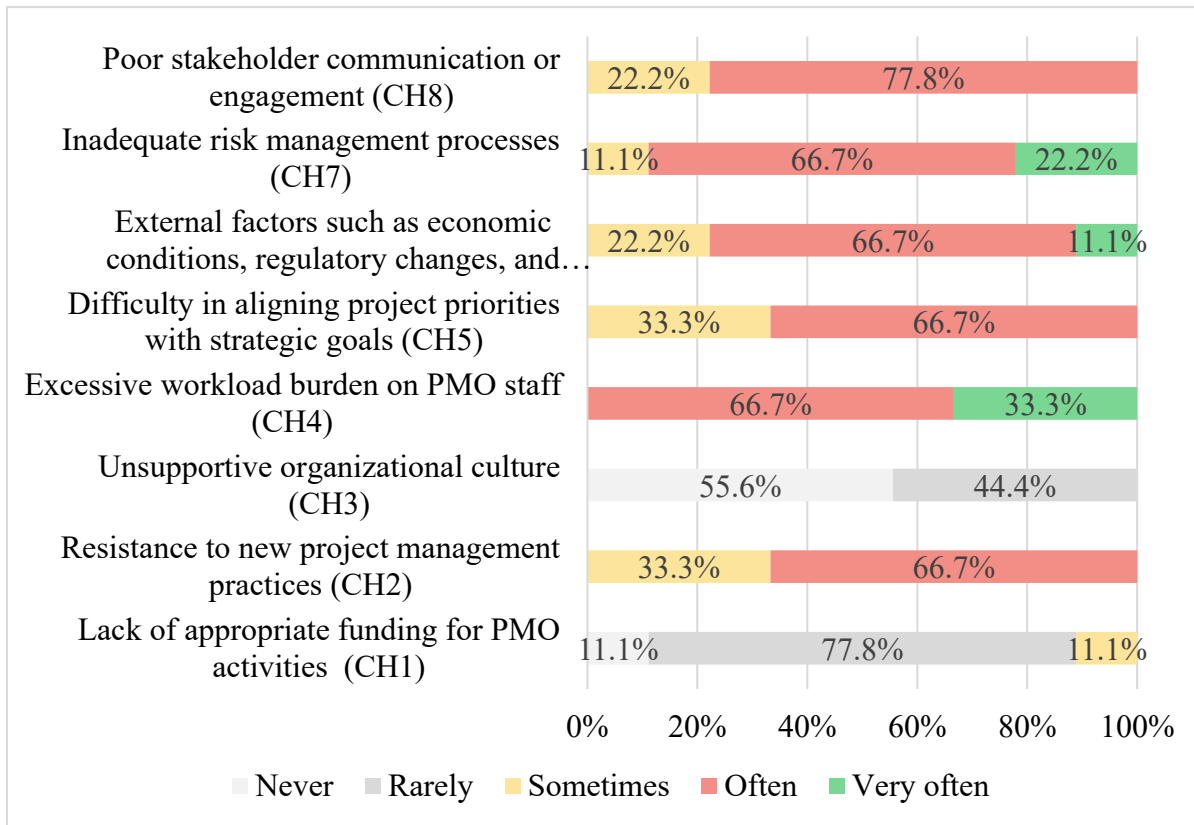


Figure 4.27: A frequency distribution of PMO's major challenges at EEU on 5-point Likert scale

Comparison with 'accepted practices'

The findings on challenges and effectiveness within EEU's PMO identify several factors hindering the organization's operational and strategic capabilities. Excessive workloads and high staff turnover significantly reduce PMO efficiency, limiting its ability to complete projects on time and within scope. External factors, combined with the absence of a formal risk management framework, expose the PMO to external disruptions, thereby increasing project uncertainty. Furthermore, communication gaps among stakeholders reduce coordination effectiveness, especially in complex or large-scale projects, leading to misaligned expectations and delays.

Comparative insights from global best practices provide actionable solutions to these problems. The Risk management framework of ISO 31000 (ISO, 2018) promotes the establishment of structured risk assessment mechanisms, allowing PMOs to anticipate and mitigate risks proactively. The PMBOK Guide (PMI, 2021) recommends implementing stakeholder engagement

frameworks to improve communication and project coordination. Meanwhile, PRINCE2 (Axelos, 2015) emphasizes the importance of workflow optimization strategies in reducing excessive workloads and improving overall operational efficiency. Implementing these best practices will assist the EEU in improving its PMO's risk management, stakeholder collaboration, and workload management capabilities.

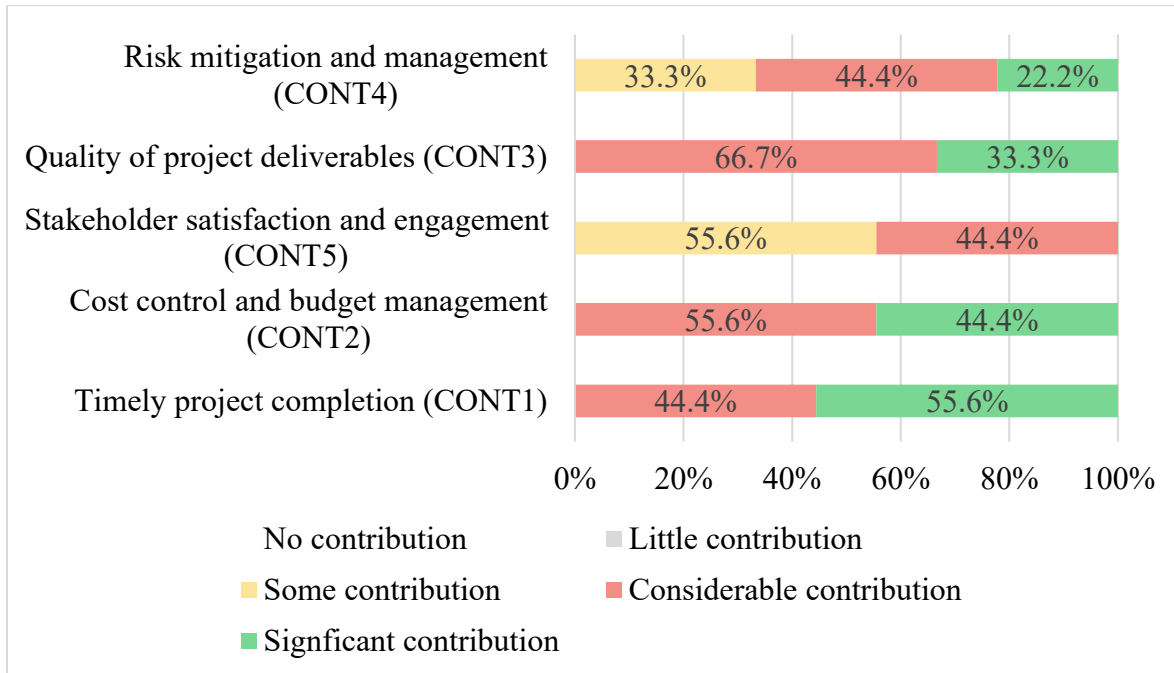


Figure 4.28: A frequency distribution of PMO's contribution at EEU on 5-Point Likert Scale

Moreover, the Likert-scale analysis provides a structured assessment of the PMO's performance at EEU, emphasizing perspectives on challenges, contributions, and overall effectiveness. PMO challenges received an overall mean score of 3.36, indicating that operational difficulties such as workload burden, high staff turnover, and coordination gaps necessitate targeted interventions.

In contrast, the PMO's contributions received a higher mean score of 4.13, indicating a significant improvement—*considerable contribution*—to cost control and budget management, as well as timely project delivery. Furthermore, the PMO's overall effectiveness score of 4.0 indicates that it is generally effective—*quite effective*—though areas such as workload burden, staff turnover, risk management, stakeholder engagement, and adaptability to external factors need to be addressed.

These findings confirm the PMO's strategic value while emphasizing the importance of continuous capacity development and institutional strengthening.

Table 4.8: Descriptive statistics of PMO [challenges, contribution and effectiveness] at EEU

<i>Constructs/variables</i>	<i>Codes</i>	<i>Overall mean score</i>	<i>Standard devi.</i>	<i>Agreement degree</i>	<i>Interpretation</i>
<i>PMO challenges</i>	CHs	3.36	0.17	Sometimes	
<i>PMO contributions</i>	CONTs	4.13	0.37	Considerable Contribution	
<i>PMO effectiveness</i>	EFFs	4.00	0.00	Quite Effective	

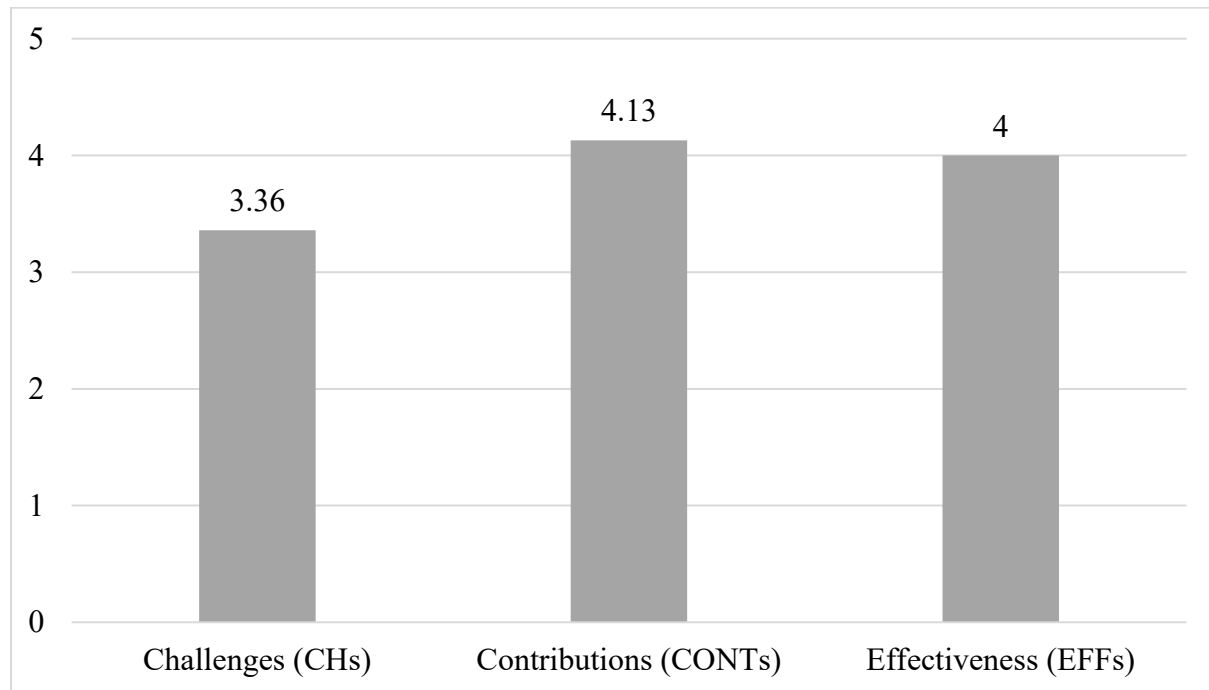


Figure 4.29: EEU's PMO [challenges, contribution and effectiveness] on 5-point Likert scale

F. PMO improvement areas and future outlook at EEU

The Ethiopian Electric Utility (EEU) has taken significant steps to enhance the effectiveness of its Project Portfolio Management Directorate (PPMD), particularly through the Civil Construction

Management Program Office (CCMPO). The implementation of an Enterprise Resource Planning (ERP) system at the organizational level, with the CCMPO selected to pilot a project management module, is a significant advancement. This initiative aims to promote integrated project oversight, improve coordination, and boost overall project management efficiency. According to one key informant, this digital transformation represents a significant step toward modernizing the PMO's operational capabilities and aligning project execution with strategic goals.

Along with technological advancements, organizational reforms are being implemented to strengthen the PMO's decision-making authority. According to one key informant, the program office is more effective when it is self-contained, with its own finance, logistics, human resources, procurement, and full decision-making authority and control. This interviewee's concern suggests a move toward decentralizing critical operational functions in order to reduce bureaucratic delays and promote project agility. Looking ahead, EEU expects that ERP-driven integration and increased PMO autonomy will improve efficiency, resource optimization, and strategic alignment, laying the groundwork for long-term project management performance.

Conclusion and recommendations

The Ethiopian Electric Utility (EEU) has established an enterprise-level project management office (PMO) within the Portfolio Project Management Directorate (PPMD) to align projects with organizational goals. The PMO reports directly to the CEO and assists with resource coordination and strategic oversight, demonstrating its potential for effective project governance. However, significant challenges remain, such as high staff turnover, competency gaps, and ineffective interdepartmental communication mechanisms, all of which reduce operational effectiveness. The PMO's emphasis on technical expertise and experience in staffing, which frequently excludes globally recognized certifications such as PMP or PMO-CP, highlights the need for more comprehensive competency-based hiring practices.

Furthermore, training programmes are inconsistent and misaligned with practical needs, with no structured frameworks or post-training evaluations to assess their efficacy. These gaps, combined with the lack of risk management frameworks and excessive workload burdens, constrain the PMO's ability to deal with external uncertainties and internal inefficiencies. Despite these

challenges, the PMO has made significant contributions to cost control and budget management, as well as timely project delivery, indicating significant opportunities for optimization.

To address these issues and comply with global best practices, the EEU must carry out targeted interventions. Improving governance through ISO 21502 (ISO, 2020)—compliant frameworks will simplify decision-making, while implementing ISO 31000 (ISO, 2018) will establish strong risk management practices. Staff stability can be improved by incorporating structured career advancement paths, competitive compensation packages, and hiring policies that prioritize technical expertise as well as globally recognized certifications.

Expanding training initiatives by allocating a set percentage of the PMO budget (5-10%) to capacity-building programs and implementing structured learning pathways will help to close competency gaps. Improving interdepartmental coordination with the PMBOK stakeholder engagement framework will improve communication and collaboration (PMI, 2021). In the meantime, using an Enterprise Resource Planning (ERP) system to digitize contract management and resource allocation will reduce workloads and improve efficiency. These initiatives will not only fill existing gaps but will also establish EEU's PMO as a strategic governance entity capable of driving long-term institutional success and project execution excellence.

4.3. Comparative Analysis of PMO Practices across Case Studies

This section presents a comparative analysis of project management office (PMO) practices across the three selected case study organizations: the Mega Projects Construction Office (MPCO), Commercial Bank of Ethiopia (CBE), and Ethiopian Electric Utility (EEU). The study employs Yin's (2009) theoretical replication strategy to compare how project-based and non-project-based PMOs differ in governance structures, staffing approaches, capacity-building efforts, operational roles, and overall effectiveness.

Then current PMO practices in the case study organizations are cross-analyzed against global project management standards, frameworks and best practices (Varajão et al., 2024), referred to as '*accepted practices*', such as PMBOK (PMI, 2021), PMI Talent Triangle (PMI, 2022), P3O (Axelos, 2013), P3M3 (Axelos, 2016), ISO 21502 (ISO, 2020), ISO 31000 (ISO, 2018), and the

national working manual—the Ethiopian Construction Project Management Manual Series (ECPMI ECPMMS:WM-17) (ECPMI, 2019) to ensure that the findings provide both theoretical insights and practical recommendations for improving PMO practices in Ethiopia's public construction sector.

A. PMO governance and strategic alignment

Governance structures significantly shape the strategic alignment and operational integration of PMOs. MPCO has a two-tiered governance structure, with deputy managers in charge of the corporate and construction functions and reporting to the general manager (GM). While this structure allows for functional focus at the departmental level, high leadership turnover (four different general managers in four years) disrupts strategic continuity and weakens accountability mechanisms. The absence of formal project charters and signed contract documents exacerbates ambiguity in roles and responsibilities, undermining transparency and oversight.

In contrast, CBE's PMO operates within the Building Construction Management Department, confining its influence to departmental projects and limiting enterprise-level strategic engagement. EEU, on the other hand, integrates its PMO into the Project Portfolio Management Directorate (PPMD), which reports directly to the CEO. This configuration facilitates strategic integration and aligns PMO goals with organizational priorities. However, performance is compromised by weak interdepartmental coordination and inefficiencies in workflow management. These case study findings emphasize the importance of enterprise-level positioning and leadership stability in improving PMO governance, which also align with ISO 21502's (ISO, 2020) recommendations for resilient governance frameworks that promote institutional accountability and strategic alignment.

B. Staffing and professional competency frameworks

Staffing approaches across the three PMOs further reveal variations in competency frameworks and recruitment practices. MPCO heavily relies on experience-based staffing, with 84.6% of respondents stating that project management experience takes precedence over other criteria for recruitment. While this approach ensures familiarity with operational contexts, it causes critical skill gaps in areas such as procurement and contract administration due to the lack of a structured

recruitment framework. Professional certifications that are widely recognized in the industry, such as PMP or PMO-CP, remain optional rather than mandatory, limiting adherence to best-practice methodologies.

CBE, on the other hand, prioritizes academic qualifications over practical experience, with 90.9% of respondents reporting technical expertise as more important than other hiring criteria. EEU employs a diverse range of experience and technical expertise; however, EEU faces the significant challenge of high staff turnover, which severely weakens institutional memory and disrupts project continuity.

The case study findings highlight the importance of competency-based recruitment strategies as well as certification-based professional development. To address skill gaps and improve institutional capacity, organizations should incorporate structured competency frameworks such as the PMI Talent Triangle (PMI, 2022) and ISO 21502 (ISO, 2020). Implementing these globally recognized standards will not only improve technical proficiency but will also align with project management best practices, fostering strategic alignment, operational efficiency, and long-term PMO resilience.

C. Training and capacity building initiatives

Training and professional development are vital for improving PMO maturity, however efforts across all three organizations remain fragmented and inadequately funded. MPCO offers irregular, budget-dependent training that focuses on general leadership topics rather than structured project management methodologies. Survey data reveals a mismatch between demand and delivery. Although 69.2% of staff prioritized technical training, only 38.5% interested in formal project management training.

CBE delivers both technical and leadership training but lacks structured certification pathways to align with global benchmarks. Similarly, EEU prioritizes project management methodology and technical development training. According to the survey findings, 100% of respondents mentioned training initiatives in project management methodologies, despite budget constraints and ineffective post-training evaluation processes.

The case study findings emphasize the importance of implementing continuous, structured training programs that are consistent with the PMBOK, Agile, and P3O frameworks (Axelos, 2013, 2015; PMI, 2021). Such initiatives are essential for increasing institutional capacity, developing workforce competency, and ensuring compliance with internationally recognized project management standards.

D. PMOs' functional roles and strategic mandates

Functional roles and strategic mandates of project management offices (PMOs) differ greatly across organizations, depending on organizational typology factors such as structural configuration, institutional maturity, and strategic integration within enterprise systems. Although the survey results show similar patterns in the primary roles of PMOs in the case study organizations, qualitative interviews with key informants reveal a clear divergence in strategic orientations.

Project-based PMOs, such as MPCO, are typically execution-oriented, with a focus on tactical delivery and resource optimization rather than long-term strategic engagement and institutional learning. In contrast, non-project-based PMOs in CBE and EEU are increasingly being integrated into organizational governance systems, where they play critical roles in performance monitoring, strategic oversight, and policy alignment.

The evolving distinction between PMO functional roles marks a paradigm shift from traditional administrative support units to strategic enablers of institutional effectiveness. This transformation necessitates a deliberate redefinition of PMO mandates, as well as policy reforms, structural elevation within organizational frameworks, and integration into enterprise-wide planning systems. Aligning PMO functions with internationally recognized standards—such as the PMBOK Guide (PMI, 2021), ISO 21502 (ISO, 2020), and the P3O framework (Axelos, 2013)—is critical for establishing PMOs as key drivers of long-term project success, strategic alignment, and public sector modernization.

E. Challenges and constraints affecting PMO effectiveness

Despite contextual differences, all three PMOs face similar operational challenges, including an excessive workload burden, external factors such as economic and regulatory changes, gaps in

stakeholder engagement, risk management practices, and institutional resilience. MPCO struggles with workload imbalances, poor stakeholder collaboration, and high leadership turnover. The CBE's procedural rigidity—bureaucratic inertia limited its agility and responsiveness, whereas risk governance in the EEU is limited due to high staff turnover. These systemic barriers highlight the importance of structured frameworks such as ISO 31000 (ISO, 2018) and the PMBOK stakeholder engagement framework (PMI, 2021) in improving coordination, risk anticipation, and organizational responsiveness.

4.4. Conclusion

In conclusion, the comparative analysis of PMO practices across case studies demonstrates how organizational typology (project-based versus non-project-based) influences PMO governance, operational dynamics, and strategic focus. MPCO's PMO has an execution-oriented focus, prioritizing project coordination, logistical efficiency, and operational delivery, which is consistent with its project-based structure but provides limited involvement in governance and strategic oversight. In contrast, the PMOs of the CBE and EEU employ governance-centered models that incorporate strategic alignment, policy oversight, and performance monitoring into their frameworks. This distinction highlights the institutional priorities that distinguish project-based and non-project-based PMOs, which influence their effectiveness in addressing organizational needs and long-term institutional resilience.

All three organizations face common challenges, including leadership instability, skill gaps, ad hoc training efforts, poor stakeholder engagement, insufficient risk governance, and a lack of standardized project methodologies. To address these issues, the study suggests implementing international best practices such as ISO 21502 (ISO, 2020) for governance, ISO 31000 (ISO, 2018) for risk management, and certification-based staffing that aligns with the PMI Talent Triangle (PMI, 2022). Furthermore, improving digital infrastructure, formalizing training systems, and strengthening strategic integration mechanisms will be critical to improving PMO maturity and performance across all institutional contexts.

4.5. Cross-Case Synthesis and Discussion

This section discusses the case-level study findings in depth and analytically while also addressing the research objectives and conceptual framework. Following Yin's (2009) multiple-case study

methodology, the analysis is divided into two sections: within-case and cross-case. The discussion focuses on five key input dimensions from the study's conceptual framework that influence PMO effectiveness: governance, staffing, stakeholder engagement, risk and resource management, and institutional learning. These analytical dimensions directly align with the study's primary research questions and/or objectives:

- What are the current PMO practices in Ethiopia's public building construction sector, particularly in terms of governance, structure, staffing, capacity building, and primary roles? To what extent do these practices deviate from globally accepted standards?
- What potential institutional and operational challenges do PMOs in the public building construction sector experience? How do they impact PMO effectiveness?

4.5.1. Within-case analysis

Mega Projects Construction Office (MPCO)

MPCO is structured as a project-based organization, but its PMO operates primarily at the departmental level, with little strategic influence. The governance structure is vertically fragmented, with frequent leadership turnover and insufficient institutional consistency. This weakens governance, strategic alignment, and long-term planning. The staffing framework relies on practical experience rather than formal project management certification, resulting in a competency gap when compared to globally '*accepted practices*'.

Furthermore, there are insufficient stakeholder engagement mechanisms, as evidenced by the lack of formal project charters and structured communication protocols. Resource allocation and risk mitigation processes are reactive rather than anticipatory. Lack of knowledge management systems and documented lessons learned impedes institutional learning. Despite these difficulties, the PMO has made significant contributions to cost control and timely project completion; however, governance structures and structured capacity development frameworks are lacking. This case exemplifies the theoretical proposition that without integrated governance and structured capacity development, PMO effectiveness is operational, not strategic.

Commercial Bank of Ethiopia (CBE)

CBE's PMO operates within a rigid, functionally driven bureaucracy, which limits its ability to contribute to strategic project governance. The staff is technically qualified, but they have little exposure to global project management practices and certifications. Governance processes are excessively centralized, resulting in bureaucratic inertia and slow decision-making.

Stakeholder integration is also lacking due to fragmented interdepartmental coordination and communication. Training initiatives are ineffective and lack a structured evaluation system, and risk and resource management mechanisms are not formalized. Institutional learning mechanisms are underdeveloped, and formal documentation is limited. This case supports theoretical replication by demonstrating that, even when technical capacity is present, a lack of structural and strategic alignment significantly reduces PMO effectiveness.

Ethiopian Electric Utility (EEU)

EEU's PMO is structurally integrated into the Project Portfolio Management Directorate and reports to the CEO, implying strong strategic alignment. However, this potential is undermined by execution-level deficiencies, including high staff turnover, limited certified staff, and weak horizontal coordination. Governance frameworks are implemented inconsistently, which limits the PMO's ability to enforce standards across departments.

Resource management and risk governance remain under-institutionalized, while stakeholder management is informal and unstructured. Institutional learning is primarily tacit, with little emphasis on documenting and disseminating project experiences. Despite these challenges, the PMO has made significant contributions to cost control and timely project completion; however, strategic alignment and organizational learning are lacking. This case supports the theoretical proposition that PMO structural elevation alone is insufficient in the absence of accountability, knowledge management, and professional development systems.

4.5.2. Cross-case analysis

Literal replications: Common organizational challenges

All three case institutions—MPCO, CBE, and EEU—are facing consistent systemic deficiencies:

- Inadequate implementation of globally recognized project management methodologies (standards, frameworks, and best practices).
- Limited institutional adoption of certified project management tools (e.g., PMP, PMO-CP).
- Fragmented or overly centralized governance that impairs integration.
- Poor stakeholder engagement and coordination.
- Institutional learning frameworks are not structured.
- There is a lack of proactive resource and risk management strategies.

These findings literally replicate the conceptual proposition that PMOs in Ethiopia's public building construction sector face institutional and operational constraints regardless of organizational structure. The findings address the first research question by demonstrating how current practices deviate from globally recognized standards, frameworks, and best practices, or '*accepted practices*'.

Theoretical replications: Divergent institutional dynamics

Divergence among the cases illustrates theoretical replication. CBE, as a non-project-based organization, has limited PMO effectiveness due to structural and procedural rigidity. While MPCO and EEU (affiliated with public infrastructure projects) are structurally aligned with project-centric frameworks, they face implementation challenges such as leadership instability and interdepartmental fragmentation.

These variations support the conceptual framework's claim that PMO effectiveness is determined not only by structural positioning but also by institutional maturity, governance consistency, and operational capability. This insight directly addresses the second research question by demonstrating how various contextual factors influence PMO maturity and effectiveness.

4.5.3. Implications and reflections of the findings

Theoretical contributions: The findings contribute to existing PMO practices by emphasizing the moderating role of organizational context in emerging economies. The research illustrates that achieving PMO maturity in the public sector requires not just structural reform but also the institutionalization of standardized project governance, competency-based staffing, and formalized knowledge management systems.

Practical contributions: For practitioners and policymakers, the study emphasizes the importance of aligning PMO structures with both globally ‘*accepted practices*’ and local context realities. Recommendations include:

- Institutionalizing professional certifications and capacity-building frameworks.
- Embedding PMOs within strategic governance layers.
- Formalizing risk and resource governance protocols.
- Strengthening cross-functional stakeholder engagement.
- Developing centralized knowledge management systems for continuous learning.

In conclusion, the public sector must transition from ad hoc, experience-based PMO staffing models to formal, system-oriented frameworks. This transformation will improve transparency, project outcomes, and long-term institutional resilience.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

As stated in Chapter One, the major objectives of this study were to explore the practices of project management offices (PMOs) in the Addis Ababa public building construction sectors and compare these practices to globally recognized frameworks, standards, and best practices—‘*accepted practices*’ and identify potential gaps, challenges, and improvement strategies. The study attempted to achieve these objectives by taking PMO practices in both project-based and non-project-based organizations as case studies, as well as literature recommendations as starting points.

As presented in Chapter Four, the study began by describing PMO structures and governance, staffing frameworks, capacity-building initiatives, and operational practices in the case study organizations. The empirical evidence gathered from case studies through interviews, document reviews, and surveys was then analyzed in light of the study's conceptual framework as well as globally recognized project management standards, frameworks, and best practices. It then compares these practices to globally ‘*accepted practices*’ to identify significant gaps and their implications for project governance and delivery performance.

This Chapter summarizes the major findings, assesses the extent to which the research questions and objectives were achieved, highlights the study's theoretical and practical contributions, reflects on the quality of the research approach, and makes recommendations for practice and future research.

5.2. Summary of Major Findings

The findings of the study revealed that while PMOs have been established across the selected organizations, their structure and influence remain predominantly departmental, limiting their capacity to drive enterprise-wide project governance and strategic alignment. Most PMOs are primarily concerned with administrative functions such as support and coordination, with little involvement in strategic project portfolio management. This primary function of PMOs differs from a globally accepted best practice that emphasizes PMOs as strategic enablers within

organizations. Governance frameworks were found to be inconsistent and frequently underdeveloped; in many cases, projects lacked formal project charters, clear role definitions, and systematic risk management practices, undermining accountability and project oversight.

The study also identified major staffing and competency development issues. The hiring process emphasized work experience over formal project management training or professional certification, resulting in skill gaps and a lack of competency. Additionally, training and capacity-building initiatives were largely informal, budget-dependent, and focused predominantly on general and nontechnical areas such as leadership rather than technical project management competencies, leading to further operational inefficiencies.

Furthermore, a lack of proactive risk management efforts and inadequate stakeholder engagement procedures increased the likelihood of organizational project scope creep, budget overruns, and schedule delays. Despite these challenges, PMOs have contributed positively to project visibility, cost and time management, and basic organizational coordination. However, structural and systemic constraints prevent them from fully contributing to the success of strategic projects.

5.3. Research Questions/Objectives Revisited

a) Research questions

The research was guided by two fundamental research questions posed in Chapter One, which the study attempted to answer. This section discusses how the study addressed these questions. The questions posed were:

- What are the current PMO practices in Ethiopia's public building construction sector, particularly in terms of governance, structure, staffing, capacity building, and primary roles? To what extent do these practices deviate from '*accepted practices*'?

Using a comprehensive multiple-case study approach, the study explored that PMOs in Ethiopia's public building construction sector differ significantly in structure, maturity, and effectiveness. While the establishment of PMOs demonstrates a recognition of the importance of systematic project management, their roles remain narrowly defined and fragmented, lacking the strategic authority implied in globally recognized project management standards, frameworks, and best practices.

- What potential institutional and operational challenges do PMOs in the public building construction sector experience? How do they impact PMO effectiveness?

The second research question was addressed by identifying operational and strategic challenges, such as limited autonomy, insufficient staffing practices, a lack of standardized methodologies, and poor integration with executive decision-making processes. These challenges have a direct impact on the effectiveness of PMOs, limiting their ability to ensure consistent project governance, risk mitigation, and strategic alignment.

b) Research objectives

This study was guided by three primary research objectives, each of which was addressed systematically through a multiple-case study design and a qualitative-dominant mixed-methods approach. The selected cases—one project-based organization (Mega Projects Construction Office, MPCO) and two non-project-based organizations (Commercial Bank of Ethiopia, CBE, and Ethiopian Electric Utility, EEU)—provided diverse operational contexts for a broad examination of PMO practices in Ethiopia's public building construction sector. The integration of interviews, document reviews, and surveys allowed for triangulated evidence and a context-specific understanding of PMO practices in the public building construction sector.

- Objective 1: Explore the current practices of project management offices (PMOs) in the public building construction sectors and identify areas for improvement.

This objective was achieved through in-depth case analyses and thematic evaluations. The study looked at the structural and operational aspects of PMOs, such as their governance frameworks, staffing practices, capacity-building initiatives, primary roles, and contributions to project success. The diversity of the organizations studied allowed for a nuanced cross-case analysis that highlighted both common patterns and context-specific practices. These insights served as the foundation for identifying gaps and areas for improvement in existing PMO setups.

According to the findings, while PMOs have been formally established in the selected organizations, their structural maturity is limited, with many confined to departmental levels rather than operating at the enterprise level. Governance mechanisms exist, but they are weakly institutionalized, with project execution often taking precedence over strategic alignment.

Furthermore, the ability of PMOs to influence broader organizational outcomes is limited due to a lack of competency-based staffing, structured capacity building, and consistent governance frameworks.

- Objective 2: Identify potential institutional and operational challenges impeding PMO performance in the public building construction sector.

To identify persistent and potential systemic barriers, the study employed triangulated methods. Using data from semi-structured interviews, structured surveys, and document reviews, the study identified potential systemic barriers such as limited decision-making authority, frequent leadership turnover, procedural inefficiencies, and fragmented risk management practices. Additionally, stakeholder engagement remains inconsistent and informal, weakening accountability and cross-functional coordination. These challenges were not isolated to a single case but were evident across all three organizations, highlighting broader structural issues within the public sector. The study validated the underlying causes of underperforming PMOs by comparing these challenges to globally recognized frameworks, standards, and best practices.

- Objective 3: Compare local PMO practices to globally recognized frameworks, standards, and best practices, and suggest evidence-based recommendations for improving PMO effectiveness in the local context.

This objective was achieved by cross-analyzing local practices against globally recognized frameworks, standards, and best practice standards, as well as the ECPMI national working manual. The comparative analysis revealed that, while some globally recognized project management concepts have been adopted, significant gaps exist in areas such as strategic integration, risk governance, standardized processes, and institutional learning. This demonstrates a fragmented adoption of globally recognized frameworks, standards, and best practices, as PMOs struggle to integrate best practices into day-to-day governance and project execution.

In conclusion, the study found that, while PMOs are formally established in Ethiopia's public building construction sector, their strategic value is limited due to structural, operational, and cultural barriers. Improving project delivery, institutional performance, and sectoral governance

requires strengthening PMO governance structures, investing in human capacity development, embedding standardized processes, and incorporating PMOs into broader organizational strategies.

This study contributes to the limited empirical literature on PMOs in developing countries by providing contextual insights into their structure, challenges, and strategic role in public building construction projects governance. Despite the study's limitations, such as a small sample size and limited access to internal documentation, the cross-case analysis and methodological triangulation approach allowed for the achievement of all stated objectives while also providing credible, evidence-based recommendations.

5.4. Theoretical and Practical Contributions

Theoretically, the study contributes to the growing body of literature on PMO practices in emerging economies by providing a context-specific analysis of how institutional, organizational, and environmental factors influence PMO effectiveness. By contextualizing the findings within established '*accepted practices*', the study emphasizes the importance of governance, competency development, and strategic integration in determining PMO effectiveness. It also extends existing models by highlighting the particular challenges faced by PMOs in resource-constrained public building construction sector environments, where bureaucratic inertia, skill shortages, and fragmented governance systems prevail.

In practice, policymakers, practitioners, and organizational leaders can benefit from the study's insightful recommendations for improving public-sector construction projects delivery performance. By mapping current practices to global '*accepted practices*', the study provides a clear framework for identifying inefficiencies and implementing reforms. Specific recommendations for elevating PMO structures to enterprise-level entities, adopting formal project governance frameworks, instituting competency-based staffing and training programs, and improving stakeholder engagement and risk management processes provide a practical roadmap for PMO improvement. As a result, the study not only informs internal organizational reforms but also contributes to broader efforts to professionalize project management practices in Ethiopia's public sector.

5.5. Reflection on Research Approach and Output

The study employed a qualitative-dominant mixed-methods design with a multiple-case study strategy, which proved effective in capturing the complex, context-dependent realities of PMO practices in public building construction sector. Methodological rigor was ensured by triangulating data sources obtained through semi-structured interviews, document review, and structured surveys in accordance with case study best practices (Yin, 2009).

The study design provided rich, detailed insights into PMO practices, while cross-case analysis improved the analytical (theoretical) robustness and generalizability of the findings. Although the study's findings are not statistically generalizable, the use of replication logic across diverse organizational contexts strengthens their relevance and applicability to similar public construction sector contexts. Thus, the study's conclusions are regarded as both valid and reliable, laying the groundwork for theoretical extension and practical application.

5.6. Recommendations

Following the findings of the study, several recommendations are made to improve PMO practices in Ethiopia's public construction sector.

- Organizations should upgrade PMOs to enterprise-level entities with formal strategic authority. Embedding PMOs directly into executive governance structures would improve alignment between project initiatives and organizational goals, as recommended by global *'accepted practices'*.
- Standardized project governance frameworks should be implemented across all public sector organizations. This includes implementing project charters, risk management plans, and formal stakeholder engagement strategies in accordance with global *'accepted practices'*. To promote greater accountability and control, organizational project management policies should include clear role definitions, approval processes, and performance monitoring protocols.
- Organizations should adopt competency-based staffing and professional development models. Recruitment and staffing criteria should prioritize internationally recognized project management certifications, and structured continuous professional development programmes should be formalized and integrated into PMO operations. Core areas of

training should include project planning, risk management, stakeholder engagement, and digital project management tools.

- Proactive stakeholder engagement frameworks must be developed and operationalized. PMOs should establish structured mechanisms for identifying, analyzing, and managing stakeholder expectations throughout the project lifecycle, in accordance with global ‘*accepted practices*’.
- PMOs should leverage digital technologies to improve project tracking, knowledge management, and decision-making. Integrating project management software systems would enhance data visibility, coordination, and reporting, leading to increased efficiency and transparency.
- Finally, future research may expand the scope of inquiry to include a broader sample of organizations and incorporate longitudinal analyses to track PMO evolution and effectiveness over time. Quantitative studies measuring the impact of PMO maturity on key performance indicators such as cost, schedule, and quality would further deepen understanding and support evidence-based improvements.

In conclusion, implementing these recommendations, which are based on both globally ‘*accepted practices*’ and local contextual realities, would significantly improve PMO effectiveness and, as a result, the overall success of public construction projects in Ethiopia.

5.7. Limitations of the Study and Future Areas of Research

While this study sheds light on the practices of project management offices (PMOs) in Ethiopia's public construction sector, it is important to acknowledge some limitations that may influence the findings' interpretation and generalizability.

- The study focused on three public institutions—MPCO, CBE, and EEU—selected through purposive sampling to reflect both project-based and non-project-based organizational contexts. Although this comparative case design enabled in-depth analysis, the limited number of cases restricts the extent to which the findings can be generalized across the wider public construction sector in Ethiopia.
- The sample size for survey respondents and interview participants was relatively small, constrained by the number of PMO staff available within the selected organizations. This

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

limited the ability to conduct inferential statistical analysis and may have introduced response bias, despite efforts to include diverse perspectives across roles and departments.

- Access to internal operational documents and real-time PMO performance data was limited in some cases due to institutional confidentiality policies. As a result, the analysis relied more heavily on perceptions and self-reported practices, which, while insightful, may not fully capture the actual implementation and performance of PMOs.
- The study adopted a cross-sectional research design, capturing PMO practices at a specific point in time. Longitudinal analysis would provide a more dynamic understanding of how PMO maturity and effectiveness evolve in response to reforms, leadership changes, or policy shifts.

Therefore, future research may expand the scope of inquiry to include a broader sample of organizations and incorporate longitudinal analyses to track PMO evolution and effectiveness over time. Quantitative studies measuring the impact of PMO maturity on key performance indicators such as cost, schedule, and quality would further deepen understanding and support evidence-based improvements.

Despite these limitations, the methodological triangulation employed—combining interviews, surveys, and document review—helped strengthen the validity of the findings and ensured a balanced, contextually grounded understanding of PMO practices in Ethiopia’s public sector. These limitations, however, do not diminish the study's contribution; rather, they highlight areas for future research, particularly studies that include a broader institutional base and investigate the long-term evolution of PMOs in the Ethiopian public construction sector.

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*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

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*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

APPENDICES

APPENDIX A

Appendix IA: Cooperation Letter

College of Technology and Built Environment

School of Civil & Environmental Engineering

Graduate Program: Construction Technology & Management

Dear Participant,

I am conducting a research study titled “*The Practices of Project Management Offices in Public Building Construction Projects: The Case of Selected Organizations in Addis Ababa*”, in partial fulfillment of the requirements for my Master of Science degree in Construction Technology and Management at Addis Ababa University.

The primary objective of this study is to investigate the current practices of Project Management Offices (PMOs) in the public building construction sector of Addis Ababa. Preliminary study findings have provided initial insights. However, further in-depth information is required regarding organizational structures, staffing profiles, staff competencies, and capacity-building initiatives. Therefore, this study will include a detailed case study of three selected public organizations' project offices: the Mega Project Construction Office, the Commercial Bank of Ethiopia, and the Ethiopian Electric Utility.

Your participation in this research is entirely voluntary. All data collected will be treated with strict confidentiality and used exclusively for academic purposes. Individual responses will be anonymized and reported in aggregated form to ensure privacy. Upon completion of the study, I would be pleased to share the final research findings with you.

Should you have any questions or require additional information, please do not hesitate to contact me. Thank you very much for your kind cooperation and valuable contribution to this research.

Sincerely,

Marsimoyi Weyuma Dame

Email: marsimoyi.weyuma@aait.edu.et

Phone: +251911284771

Appendix IB: Interview Guide Questions for Preliminary Study

This semi-structured interview guide is intended for use during the exploratory phase of the study. It seeks to gather foundational insights from key informants—primarily PMO heads or senior managers—regarding the establishment, structure, and perceived effectiveness of Project Management Offices (PMOs) in public building construction projects in Ethiopia.

A. PMO Establishment and Rationale

- How and why was the PMO established in your organization?
- What specific organizational needs, inefficiencies, or challenges prompted its formation?
- What implementation procedures or steps were followed in establishing the PMO?

B. Organizational Structure and Integration

- How would you describe the organizational structure and placement of the PMO within the institution?
- To whom does the PMO report, and what is the nature of this reporting relationship?

C. PMO Roles and Responsibilities

- What official roles and responsibilities have been assigned to the PMO?
- What types of projects fall under the PMO's mandate?
- Does the PMO contribute to project selection or strategic alignment with broader institutional goals?

D. Resource Allocation and Capacity

- What resources (such as budget, staffing, and tools) were allocated during the PMO's establishment?
- How PMO staff are selected, assigned, and trained?
- In your opinion, are the allocated resources adequate for the PMO to function effectively?

E. Methodology and Operational Approach

- Is there a standard project management methodology or framework that the PMO uses for project delivery?
- If yes, how was this methodology chosen or customized for your organization's needs?

F. Implementation Challenges and Support

- Did you encounter any major challenges during the PMO's establishment or implementation phases?
- How were these challenges addressed?

THE END OF INTERVIEW GUIDE

Appendix IC: Interview Guide Questions for Main Data Collection Phase

This semi-structured interview guide has been developed for the main data collection phase of the case study. It is intended for in-depth interviews with key informants, particularly Project Management Office (PMO) heads and directors, team leaders, and senior technical professionals directly involved in public building project management. The aim is to collect detailed insights into the structure, governance, functions, capacity, effectiveness, and contextual challenges of PMOs operating in Ethiopia's public construction sector.

Theme A: Organization Structure

- Is the PMO a separate department in your organization? (Yes/No)
- Does the PMO have a formalized reporting structure? (Yes/No)
- Can you describe the organizational structure of your PMO? How does it fit within the overall organization?
- What are the key roles and responsibilities within the PMO?
- Can you describe how the PMO interacts with other departments?

Theme B: Staffing

- How many staff members are currently part of the PMO? (Provide number)
- Do you have dedicated HR support for PMO staffing? (Yes/No)
- How is the recruitment process for PMO staff conducted? What are the criteria for selection?
- What are the key competencies required for PMO staff?
- What challenges have you faced in staffing the PMO?

Theme C: Level of Experience and Competency of Staff

- How many years of experience do most PMO staff have? (Provide range options, e.g., 0-2 years, 3-5 years, etc.)
- Do you conduct regular training sessions for PMO staff? (Yes/No)
- Do you conduct competency-based performance reviews? (Yes/No)
- What are the key competencies and skills that PMO staff possess?
- How do you ensure continuous professional development for PMO staff?

Theme D: Capacity Building

- Does the organization provide regular training for PMO staff? (Yes/No)
- Are there specific capacity-building initiatives targeted at PMO staff? (Yes/No)
- Is there a budget allocated for PMO training and development? (Yes/No)
- How are training needs identified within the PMO?
- Can you describe any specific training programs or workshops conducted by the PMO?
- How does your PMO support the development of project management skills across the organization?

Theme E: PMO Function and Effectiveness

- Does the PMO have a standardized process for project management? (Yes/No)
- Is there a regular reporting mechanism from the PMO to senior management? (Yes/No)

- What metrics and KPIs are used to measure the success and effectiveness of the PMO?
- How does the PMO support project delivery across different departments?
- Can you describe a successful project that the PMO has facilitated and the role it played in that success?

Theme F: Challenges and Improvements

- Have there been significant changes to the PMO structure in the past 5 years? (Yes/No)
- Do you conduct regular reviews of PMO processes and outcomes? (Yes/No)
- What are the most significant challenges your PMO faces in delivering successful construction projects?
- What initiatives do you think could further enhance the effectiveness of the PMO in the construction industry?
- How does the PMO handle post-project reviews and incorporate lessons learned into future projects?
- How are lessons learned from projects documented and shared within the organization?
- What are the biggest challenges your PMO has faced since its inception?
- How has your PMO adapted to overcome these challenges?
- What improvements do you think could enhance the effectiveness of the PMO?

Theme G: PMO Success Factors

- Do you have key performance indicators (KPIs) specific to the PMO? (Yes/No)
- Does the PMO have a clear success roadmap or framework? (Yes/No)
- What factors do you believe contribute most to the success of your PMO?
- Can you provide an example of a particularly impactful initiative led by the PMO?
- How does your PMO measure success, and what metrics are most important?

Theme H: PMO Evolution and Future Outlook

- How has the role of the PMO evolved in your organization over time, especially in relation to managing construction projects?
- What changes do you foresee in the PMO's structure or practices in the near future, particularly in the context of the construction industry's evolving needs?
- What strategies is your PMO implementing to adapt to emerging trends or challenges in the construction sector (e.g., new technologies, sustainability concerns)?

THE END OF INTERVIEW GUIDE

Appendix ID: Supplementary Questionnaire Survey for Main Data Collection Phase

This structured questionnaire is designed to assess the establishment, structure, roles, functions, performance, and challenges of Project Management Offices (PMOs) in Ethiopia's public building construction sector. The responses will contribute to understanding the current PMO practices and inform recommendations for improved project governance and performance.

PART I: DEMOGRAPHIC INFORMATION [General questions about the respondents]

- 1) Please specify the total number of years of your professional experience in project management.
 - Less than 5 years
 - 5-10 years
 - 11-15 years
 - More than 15 years
- 2) What is the highest level of formal education you have completed?
 - Master's degree
 - Bachelor's degree
 - Diploma
 - Short-term certificate
 - Other (please specify): _____
- 3) What is your current position within the Project Management Office (PMO)?
 - Executive (CEO, Director)
 - PMO Manager/Staff
 - Project Manager
 - Functional Manager
 - Other (please specify): _____

PART II: PMO IN THE ORGANIZATION [General Open- and close-ended questions about the PMO entity in the respondent's organization]

- 4) What is the level of authority and influence of your PMO within the organization?
 - Executive level
 - Departmental level
 - Project level
 - Other (please specify): _____
- 5) Which of the following best describes the core responsibility of your PMO? (*Select all that apply*)
 - Project coordination
 - Support and facilitation
 - Strategic alignment
 - Governance and oversight

- Other (please specify): _____
- 6) PMO Size:
- 0-14 employees
 - 15-29 employees
 - 30-99 employees
 - Over 100 employees
- 7) For how many years has your organization's Project Management Office (PMO) been operational?
- Less than 2years
 - 2-5years
 - 5-10years
 - More than 10years
- 8) How would you rate the current maturity level of your PMO?
- Level 1: Initial/Ad hoc
 - Level 2: Repeatable
 - Level 3: Defined
 - Level 4: Managed
 - Level 5: Optimized
 - Not sure

PART III: PMO Staffing [General questions about PMO's staff experience, competency and capacity building]

- 9) What qualifications are prioritized when hiring PMO staff members? (*Select all that apply*)
- Experience in project management
 - Relevant certifications
 - Leadership skills
 - Technical expertise
 - Other (please specify): _____
- 10) How often are PMO staff members evaluated on their performance? (*Select all that apply*)
- Quarterly
 - Biannually
 - Annually
 - As needed
 - Other (please specify): _____
- 11) Please indicate the methods used to assess the competencies of PMO staff members (*Select all that apply*)
- Performance reviews

- Peer evaluations
 - Self-assessments
 - Manager evaluations
 - Other (please specify): _____
- 12) What strategies are employed to enhance PMO staff's technical skills and knowledge of emerging technologies? (*Select all that apply*)
- Workshops
 - On-the-job training
 - Professional networking
 - Other (please specify): _____
- 13) How are training needs assessed for PMO staff? (*Select all that apply*)
- Performance reviews
 - Staff surveys
 - Manager recommendations
 - Skill assessments
 - Other (please specify): _____
- 14) What metrics are used to evaluate the impact and outcomes of training programs for PMO staff? (*Select all that apply*)
- Pre- and post-training assessments
 - Feedback surveys
 - Performance metrics
 - Observation and monitoring
 - Other (please specify): _____
- 15) How often are training opportunities provided to PMO staff? (*Select all that apply*)
- Monthly
 - Quarterly
 - Annually
 - As needed
- 16) Which areas of professional development are prioritized in training programs for PMO staff? (*Select all that apply*)
- Technical skills
 - Soft skills
 - Leadership development
 - Project management methodologies
 - Other (please specify): _____

PART IV: PMO Capability [General questions about the current state of PMO in the respondent's organization]

- 17) What were the key drivers (business case) for establishing a Project Management Office (PMO) in your organization? *(Select all that apply)*
- Standardize project management methodologies
 - Optimizing resource allocation and utilization
 - Enhancing organizational performance
 - Centralizing project management expertise
 - Improving project visibility and reporting
 - Aligning projects with strategic goals
 - Mitigating project risks and uncertainties
 - Improving staff project management capabilities
 - Improving stakeholder communication and engagement
 - Promoting organizational learning and knowledge sharing
 - Other (please specify): _____

PART V: PMO Functions and Duties [General questions about the functions and roles of PMOs in the respondent's organization]

- 18) What types of projects are under the PMO's oversight? *(Select all that apply)*
- Public buildings
 - Infrastructure (roads, bridges, etc.)
 - Utilities (water, electricity, telecom)
 - Other (please specify): _____
- 19) Which of the following best describes the PMO's engagement in public building projects?
- Direct management of projects
 - Oversight and support
 - Monitoring and reporting only
 - Advisory role
 - Other (please specify): _____
- 20) What does your PMO actually do? *(Select all that apply.)*
- Coordination among multiple projects or sub-projects of a megaprojects
 - Resource allocation and sharing
 - Tracking the overall project progress and reporting to the project leaders
 - Evaluating project performances against baselines and issuing corrective actions
 - Developing a knowledge repository for PM tools and methods
 - Other (please specify): _____

21) Please select the primary ways your PMO contributes to project success. (*Select all that apply*)

- Formalizes project selection through project portfolio management
- Enhances timely completion of projects
- Helps keep projects within budget
- Improves stakeholder engagement and satisfaction
- Increases quality of project deliverables
- Strengthens project risk management
- Centralizes project reporting
- Documents lessons learned
- Other (please specify): _____

22) Which of the PMO functions listed above has had the greatest impact on your organization's project outcomes in terms of timeliness, budget, and quality? (Select the top three).

PART VI: Benchmarking and Tracking Performance of PMO [General questions about benchmarking practices and performance tracking of PMOs in the respondent's organization]

23) How are performance and success of the PMO measured in your organization? (*Select all that apply*)

- Key performance indicators (KPIs)
- Project outcome metrics (time, cost, quality)
- Client or stakeholder satisfaction
- Internal evaluations or audits
- No formal performance measurement system
- Other (please specify): _____

24) Does your PMO track KPIs to track project performance?

- YES
- NO

25) Does the PMO employ standardized project management tools or methodologies?

- Yes
- No

26) If yes, which tools or methodologies are used? (Select all that apply)

- PMBOK Guide (Project Management Body of Knowledge)
- Microsoft Project or Primavera
- In-house developed tools
- Other (please specify): _____

27) How would you describe the consistency of methodology application across projects?

- Very consistent

- Somewhat consistent
- Inconsistent
- Not applied at all

28) Does the PMO benchmark its practices against national or international standards?

- Yes, regularly
- Occasionally
- Rarely
- Not at all

29) What external standards, frameworks, or best practice models are referenced by your PMO? (*Select all that apply*)

- PMBOK (Project Management Body of Knowledge)
- PRINCE2 (Projects IN Controlled Environments)
- ISO 21500 or other ISO project management standards
- Government or donor guidelines
- Other (please specify): _____
- None

PART VII: PMO Challenges [*General questions about the challenges and/or obstacles affecting PMO effectiveness*]

30) What are the main obstacles your PMO faces in achieving its project success goals? (*Select all that apply*)

- Excessive workload burden on PMO staff
- The PMO may add bureaucratic complexity to the organization.
- Unsupportive organizational culture
- Resistance to change and adoption of new practices
- Senior management acceptance
- Competing priorities and demands on project teams
- Lack of support from top management
- Difficulty in aligning project priorities with strategic goals
- Insufficient resources (budget, staffing, tools)
- Complex organizational structures and processes
- External factors such as economic conditions, regulatory changes, and industry trends
- Difficulty in measuring and demonstrating the value of the PMO
- Others, please specify

31) Which of the aforementioned PMO challenges has had the greatest impact on your organization's project success? (*Select the top three*).

32) How often do the following challenges impact the PMO's ability to deliver successful projects? (Rate on a scale of 1 to 5, with 1 being never and 5 being very often)

*The Practices of Project Management Offices in Public Building Construction Projects:
The Case of Selected Organizations in Addis Ababa*

No.	Possible challenges	Frequency				
		1	2	3	4	5
1	Lack of appropriate funding for PMO activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Resistance to new project management practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Unsupportive organizational culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Unreasonable workload for PMO staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Difficulty in demonstrating the value or success of the PMO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other (Please specify):					
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33) To what extent do external factors influence the PMO's effectiveness? (*Select all that apply*)

- Regulatory requirements or compliance mandates
- Shifts in political leadership or administrative priorities
- Donor or funding agency expectations
- Broader sectoral reforms or development strategies
- No significant external influence
- Other (please specify): _____

34) Has your PMO been affected by changes in government policy or institutional restructuring in recent years?

- Yes No Not sure

PART VIII: Key Success Factors within PMOs [General questions about the key success factors within PMOs in the respondent's organization]

35) Which of the following factors do you consider essential for PMO success in managing large-scale projects? (*Select all that apply*)

- Effective Leadership
- Clear and Defined Project Objectives
- Skilled and Competent Staff
- Efficient Communication with Stakeholders
- Robust Risk Management
- Resource Availability
- Other (please specify): _____

36) To what extent do you agree that the following elements within the PMO contribute to project success? (Rate on a scale of 1–5, with 1 being Strongly Disagree and 5 being Strongly Agree)

No.	Element	Level of Contribution				
		1	2	3	4	5
1	Clear project objectives aligned with the organization's goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Competency and experience of PMO staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Well-defined PMO structure and responsibilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Effective risk management processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Open and transparent communication with project stakeholders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

37) What factors are most important for improving PMO effectiveness in Ethiopia's public construction sector? (*Select all that apply*)

- Clear legal or policy framework
- Skilled and certified staff
- Management and political support
- Defined PMO roles and functions
- Integrated knowledge management
- Investment in digital tools and systems

38) Based on your experience, to what extent does the PMO contribute to the following project outcomes? (Rate on a scale of 1-5, where 1 indicates no contribution and 5 indicates significant contribution)

No.	Possible Project Outcomes	Extent (level) of contribution				
		1	2	3	4	5
1	Timely project completion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Cost control and budget management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Stakeholder satisfaction and engagement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Quality of project deliverables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Risk mitigation and management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Overall project success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

39) How would you rate the PMO's effectiveness in improving project performance, particularly on large-scale construction projects within your organization? (Rate on a scale of 1 to 5, with 1 being not effective and 5 being highly effective.)

Not Effective Slightly Effective Moderately Effective Effective Highly Effective

PART IX: Knowledge Management and Institutional Learning

[General questions about the PMO's role in capturing, managing, and utilizing institutional knowledge to promote learning and continuous improvement]

40) Does your PMO maintain a formal system for documenting and sharing lessons learned from projects?

Yes No Partially/Inconsistently Not sure

41) What types of knowledge assets are maintained by the PMO? (*Select all that apply*)

- Project templates and toolkits
- Standard operating procedures (SOPs)
- Lessons learned databases
- Performance reports or case studies
- Knowledge-sharing platforms (e.g., dashboards)
- Other (please specify): _____

42) How often are lessons learned from completed projects reviewed and integrated into future projects?

Rarely Occasionally Frequently Always

43) Are there institutional mechanisms to facilitate knowledge transfer between projects or teams? (*Select all that apply*)

- Staff debriefings or post-project reviews
- Internal workshops or knowledge-sharing sessions
- Documentation of best practices
- Rotation or mentoring programs
- Other (please specify): _____

PART X: Open-Ended Question

44) In your opinion, what are the most important factors that drive project success within your PMO? Please explain briefly.

45) What one recommendation would you make to enhance the impact of PMOs in your organization? Please explain briefly.

THE END OF QUESTIONNAIRE SURVEY

APPENDIX B

Appendix IIB: Constructs/Variables and Agreement Scale

This appendix provides additional information on constructs/variables: PMO Challenges (7CHs), PMO Contribution (5CONTs), and PMO Effectiveness (EFFs), and the range of scale used for interpretation on 5-point Likert scale.

Table 1: PMO Challenges (7CHs)

Constructs/Variables	Codes	Items	Agreement Scale				
			1	2	3	4	5
PMO Challenges (CHs)	CH1	Lack of appropriate funding for PMO activities					
	CH2	Resistance to new project management practices					
	CH3	Unsupportive organizational culture					
	CH4	Unreasonable workload for PMO staff					
	CH5	Difficulty in demonstrating the value or success of the PMO					
	CH6	External factors such as economic conditions, regulatory changes, and industry trends					
	CH7	Inadequate risk management processes					

N—Never (1) R—Rarely (2) S—Sometimes (3) O—Often (4) VO—Very Often (5)

Table 2: 5-Point Likert Scale Result Interpretation [7CHs]

Likert Scale	Interval	Difference	Interpretation
1	1.00-1.79	0.79	Never
2	1.80-2.59	0.79	Rarely
3	2.60-3.39	0.79	Sometimes
4	3.40-4.19	0.79	Often
5	4.20-5.00	0.79	Very Often

Table 3: 5-Point Likert Scale Result Interpretation [5CONTs]

Likert Scale	Interval	Difference	Interpretation
1	1.00-1.79	0.79	No Contribution
2	1.80-2.59	0.79	Little Contribution
3	2.60-3.39	0.79	Some Contribution
4	3.40-4.19	0.79	Considerable Contribution
5	4.20-5.00	0.79	Significant Contribution

Table 4: PMO Contribution (5CONTs)

Constructs/Variables	Codes	Items	Agreement Scale				
			1	2	3	4	5
PMO Contribution (CONTR)	CONT1	Timely project completion					
	CONT2	Cost control and budget management					
	CONT3	Stakeholder satisfaction and engagement					
	CONT4	Quality of project deliverables					
	CONT5	Risk mitigation and management					

NC—No Contribution (1) LC—Little Contribution (2) SC—Some Contribution (3)
CS—Considerable Contribution (4) SC—Significant Contribution (5)

Table 5: PMO Effectiveness (EFFs)

Constructs/Variables	Codes	Agreement Scale				
		Not Effective (1)	Less Effective (2)	Moderately Effective (3)	Quite Effective (4)	Highly Effective (5)
PMO EFFECTIVENESS (EFF)	EFF					

Not Effective (1) Less Effective (2) Moderately Effective (3) Quite Effective (4) Highly Effective (5)

Table 6: 5-Point Likert Scale Result Interpretation [EFFs]

Likert Scale	Interval	Difference	Interpretation
1	1.00-1.79	0.79	Not Effective
2	1.80-2.59	0.79	Less Effective
3	2.60-3.39	0.79	Moderately Effective
4	3.40-4.19	0.79	Quite Effective
5	4.20-5.00	0.79	Highly Effective

THE END OF APPENDICES