EFFECT OF PUBLIC FINANCIAL MANAGEMENT PRACTICES ON OPERATIONAL PERFORMANCE: A CASE OF RURAL ELECTRIFICATION AND RENEWABLE ENERGY CORPORATION

DIANA CHEPKORIR KOECH

MCOM/ 168931

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF COMMERCE AT STRATHMORE UNIVERSITY BUSINESS SCHOOL

MAY, 2025

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

Diana Chepkorir Koech
MCOM/168931

Approval

The dissertation of Diana Chepkorir Koech was approved by the following:

Dr.Tecla Kivuli
Strathmore University Business School

Dr. Ceaser Mwangi,
Executive Dean
Strathmore University Business School.

Prof. Bernard Shibwabo
Director, Office of Graduate Studies

DEDICATION

I dedicate this dissertation to my immediate family, who have always been there for me and believed in my dreams. May God bless you all!

ACKNOWLEDGEMENT

I am indebted to God for making it possible for me to reach this far. Much appreciation goes to my supervisor, Dr. Tecla Kivuli, for always guiding me and responding on time whenever I needed help with the research dissertation. I appreciate her so much. Specifically, I would like to thank all REREC staff who, involuntarily and within a short period, responded to the data collection too.

ABSTRACT

This study investigated the impact of public financial management (PFM) practices on the operational performance of the Rural Electrification and Renewable Energy Corporation (REREC) in Kenya. The research focused on three critical aspects of PFM: funding, budgeting processes, and financial reporting, examining their influence on REREC's ability to deliver efficient and reliable energy services. The specific objectives were to establish the influence of funding on operational performance, to examine the effect of budgeting processes on operational performance, and to assess the impact of financial reporting on operational performance in REREC. Utilizing a quantitative research design, data were collected from 150 managerial staff members through structured questionnaires. Cronbach's alpha was used to verify reliability, and content validity was assessed by consulting domain experts. The study's conceptual framework is grounded in the New Public Financial Management (NPFM) theory and the Balanced Scorecard (BSC) framework, which collectively provide a comprehensive approach to understanding the interplay between PFM practices and operational performance. The data was analyzed using IBM Statistical Package for Social Sciences (SPSS) version 29. The findings revealed that effective financial reporting substantially impacts REREC's operational performance, followed closely by budgeting processes and funding. Despite significant strides in implementing PFM practices, challenges such as delayed budget approvals, inconsistent funding streams and inadequate financial reporting mechanisms hinder REREC's operational efficiency. These issues result in project delays, increased operational costs and reduced customer satisfaction undermining the organization's ability to fulfill its mandate. This research contributes to the theoretical discourse on strategic financial management in public utilities, offering practical recommendations to enhance budgeting, resource allocation and financial reporting in Kenya's energy sector. It emphasizes the need for policy reforms, capacity building and the adoption of advanced financial technologies to strengthen PFM practices, improve service delivery and support Kenya's Vision 2030 goals for universal energy access.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

KPLC	Kenya Power and Lighting Company.
REREC	Rural Electrification and Renewable Energy Corporation.
PFM	Public Financial Management.
KETRACO	Kenya Electricity Transmission Company Limited.
IRB	Institutional Review Board.
NACOSTI	National Council for Science and Technology.
SPSS	Statistical Package for Social Sciences.
RBV	Resource-Based View
NPFM	New Public Financial Management
RDT	Resource Dependency Theory

DEFINITION OF OPERATIONAL TERMS

Funding refers to allocating financial resources necessary to effectively carry out its mandated operations, achieve its strategic objectives, and maintain or improve its service delivery (Solovey, 2020).

Budgeting Processes: Budgeting processes involve the planning, allocating, and managing financial resources to align with an organization's strategic goals (Cokins, 2018).

Financial Reporting: Financial reporting refers to the preparation and dissemination of financial information to stakeholders, ensuring transparency, accuracy, and compliance with reporting standards (Barth & Schipper, 2018).

Operational Performance: Operational performance refers to the efficiency and effectiveness with which an organization carries out its core functions and achieves its objectives (Taouab & Issor, 2019).

Public Financial Management: PFM encompasses the laws, rules, systems, and processes used by public sector organizations to mobilize revenue, allocate public funds, undertake public spending, account for funds, and audit results (Bandy, 2023).

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Public financial management (PFM) is pivotal in ensuring the efficient allocation and utilization of financial resources in both the public and private sectors. Effective PFM practices are essential to achieving sustainable economic growth and improving public service delivery. According to the International Monetary Fund (IMF), countries with robust PFM systems report better fiscal discipline, transparency, and accountability, enhancing operational performance across various sectors (IMF, 2021). However, challenges in budgeting processes, financial reporting, and funding mechanisms often hinder the operational performance of public utilities, particularly in developing economies.

The energy sector is a critical driver of socio-economic development and faces significant funding challenges globally. For instance, the International Energy Agency (IEA) reported that investment in energy infrastructure needs to increase by 30% annually to meet the growing global demand for electricity and achieve net-zero emissions by 74/2050 (IEA, 2022). Despite international efforts to mobilize financial resources, many countries experience financial gaps that hinder utility companies' operational performance, affecting their ability to deliver reliable and affordable energy services. For instance, the Rural Electrification and Renewable Energy Corporation (REREC) has faced operational inefficiencies in Kenya due to funding allocation, budgeting processes, and financial reporting challenges. These issues have led to project delays, increased operational costs, and reduced customer satisfaction, undermining the sector's ability to achieve its mandate.

The energy sector faces unique financial management challenges in Africa, including funding. According to the African Development Bank (AfDB), inadequate funding for energy infrastructure has resulted in frequent power outages, low electrification rates, and high electricity costs across the continent. Sub-Saharan Africa alone accounts for nearly 75% of the global population without access to electricity (World Bank, 2023). Governments in the region have implemented various PFM reforms to improve resource allocation and accountability. For example, adopting e-governance systems in countries like Nigeria and South Africa has enhanced transparency in public financial management. However, despite these reforms, many energy utilities grapple with

financial inefficiencies and limited funding for infrastructure projects (Banerjee et al., 2020). The gap between energy demand and available funding has widened due to rising populations and increasing industrial activities, making it imperative to explore strategic management approaches to optimize the utilization of available resources.

In Kenya, the energy sector is vital in driving economic growth and improving living standards. REREC is a key player in the country's energy sector. However, the corporation faces persistent challenges related to funding and public financial management practices, which have negatively impacted its operational performance. Kenya's Vision 2030 aims to achieve universal access to electricity, yet financial constraints have hindered progress. According to the Kenya National Bureau of Statistics (2023), the country's energy sector faces an annual funding gap of over KES 100 billion, resulting in delays in project implementation and increased operational costs. These financial challenges have led to frequent power outages, high electricity tariffs, and customer dissatisfaction, affecting the sector's overall performance.

1.1.1 Public Financial Management Practices

Public Financial Management refers to the principles, procedures, and systems governments employ to manage public resources effectively and efficiently (Eun et al., 2021). In public utilities such as REREC, PFM is instrumental in guiding how funds are mobilized, allocated, and accounted for to support strategic operations. The practice extends beyond basic accounting to incorporate comprehensive processes like budgeting, financial reporting, expenditure tracking, and auditing. It forms the foundation upon which transparency, accountability, and fiscal discipline are built in public institutions, particularly those operating in essential sectors like energy.

This study conceptualizes PFM through three interrelated dimensions: funding, budgeting processes, and financial reporting. Funding concerns the sufficiency, predictability, and timeliness of financial inflows allocated to REREC (Ibrahim, 2022). Budgeting processes involve aligning budgets with strategic goals, the flexibility of reallocation during unforeseen events, and the timeliness of budget approval (Cheruiyot, 2018; George et al., 2019). Financial reporting refers to preparing and disseminating accurate and timely financial information, ensuring transparency and regulatory compliance (Healy & Palepu, 2021; Dechow et al., 2020). These dimensions determine how effectively an institution manages its fiscal responsibilities and executes its service mandate (Fisher, 2022; Amuyunzu & Kisimbii, 2020).

Operationalization of PFM in this context includes measurable constructs that assess how each element functions within REREC. Funding is assessed based on adequacy, timeliness of disbursement, predictability of funding streams and allocation efficiency. Budgeting is evaluated by how well it aligns with strategic priorities, how flexible it is to reallocate funds, how timely approvals are secured and how engaged stakeholders are in the process. Financial reporting is measured through its timeliness, accuracy, transparency and adherence to established standards. These indicators enable an in-depth analysis of PFM's influence on REREC's ability to deliver efficient energy services.

1.1.2 Operational Performance

Operational performance within the energy sector is essential for delivering efficient and reliable services to meet the growing demands of consumers. This performance is often evaluated through indicators such as service quality, project completion rates, financial stability and customer satisfaction (Wang et al., 2018). These indicators in public corporations like REREC reflect the institution's capacity to transform financial inputs into tangible outputs and outcomes. Operational inefficiencies in procurement delays, inconsistent energy supply, and budget overruns often manifest deeper PFM challenges that impede performance delivery.

Operational performance is assessed through multiple indicators that reflect an organization's efficiency and effectiveness. Common measures include service quality, which captures the reliability and responsiveness of service delivery (Taouab & Issor, 2019), and project completion rates, which evaluate whether initiatives are finalized within approved timelines and budgets (Teece, 2020). Customer satisfaction offers insight into user perceptions and experiences (Nyamongo & Nzuki, 2019). Additional indicators include financial efficiency, which focuses on prudent resource utilization (Kaplan & Norton, 2004), and process efficiency, which examines workflow speed and productivity. These measures together provide a holistic understanding of operational effectiveness.

Three primary constructs are considered to operationalize this variable: project completion rates, service quality, and customer satisfaction. Project completion rates assess whether projects are finalized within approved timelines and budgets. Service quality encompasses the reliability of energy supply and responsiveness to outages or service disruptions. Customer satisfaction is determined using feedback mechanisms that capture end-user experiences. These indicators

provide a quantitative and qualitative measure of operational outcomes and are crucial in understanding how PFM practices impact institutional effectiveness (Taouab & Issor, 2019).

1.1.3 Rural Electrification and Renewable Energy Corporation

REREC is a pivotal entity in Kenya's energy sector, responsible for electricity distribution, rural electrification, and promoting renewable energy. The corporation was established under the Energy Act, 2019, as a successor to the Rural Electrification Authority (REA), with a broadened mandate that includes the development and promotion of renewable energy in addition to accelerating rural electrification efforts. Its key objective is to provide universal access to affordable, reliable, and modern energy services, particularly in marginalized and underserved regions across Kenya (Wetugi, 2024). The corporation works closely with other sector agencies, including the Ministry of Energy, Kenya Power and Lighting Company (KPLC), and Kenya Electricity Transmission Company (KETRACO) to align its operations with national development goals such as Vision 2030 and the global Sustainable Development Goals (SDGs).

Organizationally, REREC is structured into several functional departments and operates under a three-tier management hierarchy: top management, middle management and lower management.The managerial level comprise a total of 187 staff. Top management comprises the Chief Executive Officer and directorates general managers responsible for strategic leadership and policy direction. Middle management includes heads of sections and unit managers who coordinate project execution, budgeting and departmental performance monitoring. Lower management is made up of supervisors, team leads and senior technical officers who are tasked with the day-to-day implementation of projects and support services across various regions. This structure allows for vertical accountability and horizontal coordination among teams which is essential for effectively delivering electrification projects in diverse locations.

REREC is mandated to accelerate rural electrification and promote the development of renewable energy across Kenya. Its core activities include planning and implementing electricity access projects in underserved areas, managing the Rural Electrification Program Fund, and promoting the use of renewable energy sources such as solar, wind, and mini-hydro. REREC also undertakes the development of energy infrastructure, such as transmission lines and substations, and collaborates with county governments, communities, and development partners to co-finance

projects. Additionally, it engages in research and innovation to support sustainable and clean energy solutions

According to the most recent staffing records, REREC employs approximately 900 individuals nationwide. Out of this total, about 150 occupy managerial roles across the top, middle, and lower tiers. These managerial staff are directly involved in strategic financial planning, project oversight, budgeting, procurement, and operations, making them critical stakeholders in assessing the impact of Public Financial Management (PFM) practices on organizational performance. Despite its critical role, REREC faces challenges such as high operational costs, aging infrastructure, and power losses, exacerbated by funding and financial practices (Wetugi, 2024). Moreover, limited financial resources have delayed numerous rural electrification projects, impeding the achievement of national electrification targets (Boliko & Ialnazov, 2019; Wakajummah & Kimaku, 2023).

1.2 Problem Statement

The core problem lies in the limited empirical evidence on how integrated public financial management (PFM) practices influence operational performance in energy parastatals such as REREC in Kenya. The Kenyan energy sector is critical in driving socio-economic development, yet its operational performance remains suboptimal due to persistent inefficiencies in Public Financial Management (PFM) practices. Despite various reforms and investments, institutions like Rural Electrification and Renewable Energy Corporation (REREC) face funding allocation, budgeting processes, and financial reporting challenges. These challenges have led to project implementation delays, increased operational costs, frequent power outages and reduced customer satisfaction, all of which undermine the corporation's ability to meet its strategic mandate of expanding access to electricity, particularly in underserved rural areas (Kenya National Bureau of Statistics, 2023; Zos-Kior et al., 2020).

Existing studies tend to examine PFM components, namely, funding, budgeting, and financial reporting- as discrete variables, rather than as interdependent elements of a holistic financial management system. For instance, Cheruiyot (2018) focused on budgeting in county governments, while Ndungu and Ngugi (2017) examined the role of financial reporting in isolation. Similarly, Ibrahim (2022) assessed the impact of funding on organizational outcomes without integrating other PFM practices. This fragmented approach limits our understanding of how these financial mechanisms

work collectively to affect performance outcomes in public institutions. Consequently, a conceptual gap exists in understanding how PFM practices, when assessed holistically, influence the operational performance of energy utilities such as REREC (Mutua & Wamalwa, 2019; Odhiambo & Waiganjo, 2018).

Contextually, prior literature and policy discussions focus on national-level energy access or high-level policy frameworks but fail to provide granular insights into the operational challenges faced by specific public institutions like REREC. While international studies offer best practices, they often lack relevance to the Kenyan context due to different regulatory frameworks, funding environments, and institutional capacities. For example, studies conducted in countries such as Nigeria, Ghana, and India (Ibrahim, 2022; Owusu-Ansah, 2015; Banerjee et al., 2020) do not fully reflect the structural and financial realities of REREC. This creates a contextual gap, especially considering Kenya's unique geographical, economic, and infrastructural conditions, which directly influence PFM performance at the organizational level.

Methodologically, prior studies employed qualitative or cross-sectional designs that provide descriptive or snapshot insights but fall short of statistically validating relationships between PFM practices and performance outcomes. Additionally, using secondary data or generalized performance metrics limits the ability to generate actionable insights for specific institutions. This study addresses this methodological gap by adopting a quantitative, correlational research design using primary data collected from 150 managerial staff within REREC. This approach allows for a statistically rigorous examination of how funding, budgeting processes, and financial reporting influence operational performance, offering more targeted and empirical evidence to support policy and managerial decisions. There is limited integrated research focusing on the three PFM practices which is funding, budgeting and financial reporting. Therefore, these study will bridge these gaps.

1.3 Purpose of the Study

This study aimed to investigate the effects of public financial management (PFM) practices on the operational performance of REREC. Specifically, the study examined how funding, budgeting processes and financial reporting influence REREC's ability to deliver efficient and reliable energy services by focusing on these three funding key components of PFM, the research aimed to identify the challenges REREC faces in managing its financial resources and how these challenges impact its operational outcomes such as project completion rates, service quality and customer satisfaction.

1.4 Objectives

i. To establish the influence of funding on operational performance in REREC
ii. To examine the effect of the budgeting process on operational performance in REREC
iii. To assess the impact of financial reporting on operational performance in REREC

1.5 Research Questions

i. What is the influence of funding on the operational performance of REREC?
ii. How do budgeting processes affect REREC's operational performance?
iii. How does financial reporting impact REREC's operational performance?

1.6 Scope of the Study

This study focused on assessing the influence of PFM practices on the operational performance of REREC in Kenya. Conceptually, the study was limited to three core dimensions of PFM, funding, budgeting processes, and financial reporting, as the independent variables. These dimensions were chosen because they represent the most critical financial functions influencing project execution, resource allocation, and service delivery in public utility organizations. Operational performance served as the dependent variable, and it was measured through three constructs: project completion rates, service quality, and customer satisfaction. The study did not explore other aspects of PFM, such as procurement, internal audit, or revenue mobilization, as these were considered beyond the study's primary objectives.

Contextually, the study was confined to REREC, a state corporation under Kenya's Ministry of Energy tasked with implementing rural electrification and renewable energy projects. The choice of REREC was guided by its strategic importance in achieving national electrification goals and the financial management challenges it has faced in project implementation. The study focused exclusively on REREC and did not extend to other energy sector agencies such as KETRACO or KPLC, to ensure depth of analysis within a single institutional context.

Methodologically, the study adopted a quantitative research approach using a correlational research design. Primary data were collected through structured questionnaires administered to 150 managerial staff members across top, middle, and lower management levels within REREC.

This method was chosen to allow for statistical testing of relationships between PFM practices and operational performance. The study did not employ qualitative interviews, case studies, or mixed-method approaches, as it was explicitly designed to yield empirical data through quantifiable constructs and standardized measurements. Temporally, the research covered five years from 2019 to 2024, aligning with recent developments in Kenya's PFM reforms and energy sector policies. This timeframe was selected to reflect current practices and trends affecting operational performance within REREC, including implementing the Energy Act 2019 and Kenya's ongoing pursuit of universal access to electricity by 2030.

1.7 Significance of the Study

1.7.1 Policy Implications

This study offers critical insights for energy and public finance policymakers by highlighting the operational implications of PFM inefficiencies within state-owned utilities. By examining funding adequacy, budgeting processes, and financial reporting mechanisms, the study provides evidence-based recommendations to improve the design and execution of fiscal policies in Kenya's energy sector. The findings underscore the urgent need for streamlined funding flows, transparent budget approval cycles, and real-time financial reporting systems, which can guide national policy reforms to achieve energy equity and fiscal responsibility. In particular, this research supports policy dialogue on restructuring funding mechanisms for infrastructure projects and enhancing accountability frameworks under the Energy Act 2019 and Vision 2030 development agenda.

1.7.2 Theoretical Contributions

The study contributes to the theoretical discourse on strategic financial management by integrating New Public Financial Management (NPFM) theory and the Balanced Scorecard (BSC) framework to explain the relationship between PFM practices and operational performance. By applying these theories within the context of a public utility in a developing country, the study extends their relevance beyond traditional private-sector or Western settings. It addresses existing literature's conceptual gaps by analyzing multiple PFM dimensions and their combined effect on organizational outcomes. The study also lays the groundwork for future research on financial governance in public enterprises. It offers a theoretical model that can be adapted and tested across different sectors and regions.

1.7.3 Practical Implications

From a managerial and operational standpoint, the study provides actionable knowledge to practitioners within REREC and other public institutions facing similar financial and performance challenges. Identifying specific financial management practices that significantly impact project completion rates, service quality, and customer satisfaction equips managers with tools to evaluate and enhance internal financial operations. The study emphasizes the importance of aligning budgeting with strategic objectives, involving stakeholders in planning processes, and adopting technology-driven solutions for financial reporting. These practical insights can assist operational teams in mitigating delays, reducing resource wastage, and improving public trust through more reliable service delivery. Ultimately, the study contributes to developing a performance-oriented culture within the public energy sector.

1.8 Chapter Summary

This section has offered a comprehensive background on the role of PFM in enhancing operational performance, particularly within the context of utility companies in developing countries. It has highlighted how funding, budgeting processes, and financial reporting can affect infrastructure development and service delivery, leading to misallocation of resources, project delays, and reduced customer satisfaction. The problem statement identified the need for a detailed analysis of how these PFM practices impact the operational performance of the REREC. The research goals aimed to evaluate the impact of funding, budgeting processes, and financial reporting on REREC's operational performance, providing insights into how these PFM components can be optimized to improve service delivery and project execution. The research aimed to enhance the conversation around strategic financial management in public utilities, providing concrete suggestions that policymakers and industry professionals could implement.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presented a comprehensive review of the literature relevant to the strategic management of public financial management about the operational performance of utility companies, focusing on Kenya's energy sector, specifically the REREC. The literature review provided a theoretical foundation, identified gaps in existing research, and situates this study within current academic discussions. Beginning with the theories of strategic management, public financial management, and operational performance, the chapter examined empirical studies on funding, budgeting processes, and financial reporting in the energy sector, particularly in developing countries.

2.2 Theoretical Framework

A robust theoretical framework is essential for understanding the complex interplay between public financial management (PFM) practices and operational performance in utility sectors like Kenya's energy sector. No single theory could comprehensively address this study's variables and relationships. Instead, a multiple-theoretical approach provided a holistic perspective by drawing insights from various established theories. Each theory highlighted different dimensions of the problem, from resource allocation to dependency on external funding sources and the role of performance measurement systems.

This study is grounded in two main theories: the New Public Financial Management (NPFM) Theory and the Balanced Scorecard (BSC) Framework. These theories collectively provide the conceptual and analytical lens through which the study examines the relationship between public financial management practices and operational performance in the context of REREC. The anchoring theory for this study is the NPFM theory. This theory directly supports conceptualizing the three independent variables by linking them to institutional accountability, efficiency, and transparency in resource management. NPFM predicts that their operational effectiveness improves when public entities adhere to disciplined, transparent, and performance-oriented financial practices.

Through the lens of NPFM, this study hypothesizes the following postulations. First, adequate and timely funding improves project continuity and resource deployment, positively influencing operational performance. Secondly, streamlined and participatory budgeting processes enhance strategic alignment and resource optimization, improving operational results. Lastly, timely and transparent financial reporting fosters accountability and better decision-making, boosting operational efficiency.

On the other hand, the BSC complements the NPFM by grounding the evaluation of operational performance, which is the study's dependent variable. It predicts that when properly executed, financial inputs and strategic management processes translate into tangible improvements in project outcomes and customer satisfaction. The BSC helps interpret how internal efficiencies influenced by PFM can yield externally visible performance results. Therefore, these two theories provide a comprehensive framework: NPFM explains the causal mechanisms of internal financial practices, while BSC justifies the performance dimensions that those practices influence. Together, they predict the linkages in the study objectives and research hypotheses.

2.2.1 New Public Financial Management Theory

The New Public Financial Management theory was first advanced by Christopher Hood (1991) as part of a broader movement toward reforming public administration using market-oriented principles. The theory promotes adopting private-sector management practices such as output-based budgeting, cost-efficiency, financial transparency, and performance measurement within public sector institutions (Kioko et al., 2021). NPFM emerged as a response to inefficiencies and bureaucratic rigidity associated with traditional public administration models.

Key principles of NPFM include results-oriented budgeting, managerial autonomy, performance auditing, and strong accountability mechanisms (Kravchuk, 2023). In the context of this study, NPFM theory anchors the independent variables of funding, budgeting processes, and financial reporting. It postulates that sound financial management practices, marked by budget discipline, timely, adequate funding, and transparent financial reporting, are essential in enhancing service delivery and operational efficiency in public institutions like REREC.

Despite its transformative impact on public sector reforms globally, NPFM theory has faced criticism. Nyamori (2023) argues that it often overlooks contextual challenges in developing countries, such as weak institutional capacity, political interference, and lack of autonomy in public agencies. Others caution that excessive focus on performance metrics can lead to short-termism and neglect of long-term developmental goals.

Nonetheless, NPFM remains highly relevant to this study. It provides the theoretical justification for examining how financial resource allocation (funding), budget formulation and implementation (budgeting processes), and accurate reporting (financial reporting) influence operational outcomes. The theory supports the hypothesis that efficient PFM practices contribute to better operational performance in public utilities by promoting accountability, improving resource utilization, and aligning expenditures with service goals.

2.2.2 Balanced Scorecard (BSC)

The Balanced Scorecard (BSC) was developed by Robert Kaplan and David Norton (1992) as a strategic performance management tool. It was initially intended to complement traditional financial metrics by incorporating non-financial performance dimensions such as customer satisfaction, internal business processes, and organizational learning and growth. The BSC has since evolved into a widely used framework for aligning business activities with strategic goals and measuring comprehensive organizational performance.

In this study, the BSC anchors the dependent variable, operational performance. It provides a multi-dimensional approach to measuring REREC's performance by emphasizing financial viability and operational efficiency, e.g., project completion rates, service quality, and customer satisfaction. These are essential in evaluating a public utility's ability to deliver on its mandate.

The theory postulates that organizational performance improves when financial practices, internal processes, and customer feedback are monitored and strategically aligned (Chen et al., 2020). Thus, the BSC offers a logical basis for assessing how PFM practices (funding, budgeting, and reporting) affect REREC's ability to meet its service objectives. This supports the study's objective of linking internal financial mechanisms with external service outcomes.

However, critics of the BSC framework argue that implementing it is resource-intensive and may not suit public sector entities with rigid bureaucracies or limited data infrastructure. Akbarzadeh (2022) contends that it sometimes lacks specificity in operational definitions, particularly when applied in complex public service environments. Nevertheless, its holistic and adaptable nature makes it a suitable framework for evaluating performance in a public utility setting like REREC, where financial discipline and customer satisfaction are essential.

2.3 Empirical Review

This empirical review examines the impact of public financial management on operational performance in the Rural Electrification and Renewable Energy Corporation, drawing on relevant studies to underscore the significance of these challenges.

2.3.1 Funding on Operational Performance

Funding is a crucial determinant of an organization's ability to achieve its operational objectives, particularly in sectors such as energy, where infrastructure development and service delivery are capital-intensive. Several studies have explored the relationship between funding and operational performance, with varying conclusions on how financial resources influence service efficiency, project completion rate, and customer satisfaction. While some studies suggest that adequate funding leads to improved operational outcomes, others emphasize the role of strategic financial management in optimizing available resources to enhance performance.

For instance, in Nigeria, Ibrahim (2022) found that organizations with robust financial planning and resource allocation mechanisms demonstrated better operational performance despite financial constraints. Similarly, Kiara (2019) highlighted the importance of timely financial support in ensuring Kenya successfully implements renewable energy projects. However, Gitongah and Macharia (2023) argue that strategic partnerships and alternative funding sources can help organizations maintain performance even when traditional funding streams are limited. These findings suggest that the availability of funds is important, but the strategic management of those funds is equally critical.

Comparative studies, such as Wang et al. (2018), provide a global perspective, showing that service reliability in the energy sector is closely tied to funding adequacy. However, Capuano and Ramsay (2021) caution that focusing solely on financial inputs without addressing financial

inefficiencies may lead to suboptimal results. The mixed findings across these studies highlighted the complexity of the funding-performance relationship and suggest that the quantity and quality of financial management practices play a significant role in shaping operational outcomes. This research examined how funding dynamics impact the operational performance of energy utilities in Kenya (REREC), considering both financial availability and the effectiveness of public financial management practices.

2.3.2 Budgeting Processes on Operational Performance

Budgeting processes are a critical component of public financial management (PFM) and play a pivotal role in determining organizations' operational performance, particularly in the public sector. Effective budgeting ensures that financial resources are allocated efficiently, aligned with strategic priorities, and utilized to achieve organizational goals. According to Wang et al. (2018), organizations with robust budgeting processes demonstrate higher operational efficiency as they are better equipped to plan, monitor and control expenditures. In the context of public utilities like REREC, efficient budgeting processes ensure that funds are directed toward critical infrastructure projects, minimizing delays, and optimizing resource utilization. However, budget inefficiencies such as delayed approvals or misaligned priorities can lead to cost overruns, project delays, and reduced service quality.

In developing countries, budgeting processes often face bureaucratic inefficiencies, a lack of skilled personnel, and political interference. A study by Cheruiyot (2018) on county governments in Kenya found that organizations with streamlined budgeting processes experienced improved project completion rates and service delivery. Similarly, Banerjee et al. (2020) highlighted the importance of performance-based budgeting in reducing financial leakages and improving accountability in public programs in India. These findings underscore the significance of efficient budgeting processes in enhancing operational performance, particularly in resource-constrained environments. For REREC, adopting performance-based budgeting could help align financial resources with strategic objectives, ensuring that funds are used effectively to achieve operational goals.

Adopting advanced budgeting techniques, such as zero-based and participatory budgeting, has improved operational outcomes. For example, George et al. (2019) found that organizations implementing zero-based budgeting achieved better financial discipline and operational efficiency.

Similarly, participatory budgeting, which involves stakeholders in the budgeting process, has been linked to increased transparency and accountability, leading to improved service delivery (Sarkar & Singh, 2020). These approaches could be particularly beneficial for REREC as they would enhance stakeholder engagement and ensure that budgeting processes align with rural communities' needs. By adopting such innovative budgeting techniques, REREC could improve its operational performance and achieve its mandate of expanding electricity access to underserved areas.

Despite the potential benefits of efficient budgeting processes, many public utilities struggle with implementation due to structural and cultural barriers. A study by Amuyunzu and Kisimbii (2020) on public infrastructure projects in Kenya revealed that bureaucratic bottlenecks and a lack of capacity often hinder the effective implementation of budgeting processes. Similarly, Fisher (2022) noted that public sector organizations frequently face challenges aligning budgeting processes with long-term strategic goals, leading to inefficiencies and suboptimal outcomes. For REREC, addressing these challenges will require capacity building, stakeholder engagement, and adopting technology-driven solutions to streamline budgeting processes. By doing so, REREC can enhance its operational performance, ensuring the timely completion of projects and the delivery of reliable energy services to all Kenyans.

2.3.3 Financial Reporting on Operational Performance

Financial reporting is critical in shaping organizations' operational performance, particularly in the public sector. Transparent and timely financial reporting enhances accountability, improves decision-making, and fosters stakeholder trust, all essential for achieving operational efficiency. According to a study by Healy and Palepu (2021), organizations with robust financial reporting systems are better equipped to allocate resources effectively, monitor performance, and identify areas for improvement. In the context of public utilities like REREC, accurate financial reporting ensures that funds are used as intended, reducing the risk of mismanagement and corruption, which can negatively impact operational outcomes.

Empirical evidence from developed economies underscores the importance of financial reporting in improving operational performance. For instance, a study by Dechow et al. (2020) found that high-quality financial reporting is associated with better operational efficiency and higher profitability in publicly traded companies. Similarly, research by Francis et al. (2018)

demonstrated that transparent financial reporting reduces information asymmetry between management and stakeholders, leading to more informed decision-making and improved operational outcomes. These findings suggest that financial reporting is not merely a compliance requirement but a strategic tool for enhancing organizational performance.

In developing countries, the impact of financial reporting on operational performance is equally significant, though challenges such as weak regulatory frameworks and limited technical capacity often hinder its effectiveness. A study by Owusu-Ansah (2015) in Ghana revealed that public sector organizations with strong financial reporting practices experienced higher operational efficiency and service delivery levels. Similarly, research by Ndungu and Ngugi (2017) in Kenya found that timely and accurate financial reporting improved budget execution and project completion rates in public utilities. These studies highlight the critical role of financial reporting in addressing operational inefficiencies and ensuring that resources are used effectively to achieve organizational goals.

In the energy sector, financial reporting is particularly important for managing large-scale infrastructure projects and ensuring the efficient use of scarce resources. A study by Wang, Lee, and Wei (2018) on power utilities in Asia found that organizations with transparent financial reporting systems were better able to manage costs, reduce project delays and improve service quality. Similarly, research by Banerjee et al. (2020) on e-governance reforms in India demonstrated that improved financial reporting mechanisms reduced financial leakages and enhanced accountability in public programs. These findings underscore the importance of financial reporting as a key driver of operational performance in the energy sector, particularly in resource-constrained environments like Kenya.

2.3.4 Research Gap

While existing literature provides valuable insights into the relationship between PFM practices and operational performance, several gaps remain that limit the applicability of these findings to the energy sector in Kenya, particularly for the REREC. First, much of the research on funding, budgeting processes, and financial reporting has been conducted in developed economies or generalized across sectors, with limited focus on the unique challenges faced by public utilities in developing countries. For instance, studies like Wang et al. (2018) and Dechow et al. (2020) offer global perspectives but often overlook the specific regulatory, economic and infrastructural

conditions that shape PFM practices in Kenya. This gap highlights the need for context-specific research that addresses the localized challenges of REREC, such as funding shortfalls, bureaucratic inefficiencies, and weak financial reporting systems.

Second, while the importance of funding, budgeting, and financial reporting has been widely acknowledged, there is limited empirical evidence on how these PFM components interact to influence operational performance in the energy sector. For example, studies by Ibrahim (2022) and Cheruiyot (2018) have examined the impact of funding and budgeting processes independently, but few have explored their combined effects on operational outcomes. Similarly, research by Banerjee et al. (2020) and Owusu-Ansah (2015) has highlighted the role of financial reporting in improving accountability and efficiency. However, these studies often fail to integrate financial reporting with other PFM practices. This fragmented approach limits the ability to develop holistic strategies for improving operational performance in public utilities like REREC.

Third, there is a lack of longitudinal studies that examine the long-term effects of PFM practices on operational performance in the energy sector. Most existing research, such as that by Kiara (2019) and Ndungu and Ngugi (2017), relies on cross-sectional data, which provides only a snapshot of the relationship between PFM practices and operational outcomes. This approach fails to capture the dynamic nature of financial management and its evolving impact on operational performance over time. Given the long-term nature of energy infrastructure projects, longitudinal studies are essential for understanding how PFM practices can sustain or enhance operational efficiency in changing economic and regulatory conditions.

Finally, there is a need for more studies on the use of technology and innovation in improving PFM practices and operational performance in the energy sector. While studies like Banerjee et al. (2020) have explored the potential of e-governance and automated financial systems, there is limited empirical evidence on how these technologies can be effectively implemented in resource-constrained environments like Kenya. For REREC, adopting technology-driven solutions could streamline budgeting processes, enhance financial reporting, and improve resource allocation. However, more research is needed to identify the most effective strategies for integrating these innovations into existing PFM frameworks. Addressing these gaps provided valuable insights for improving operational performance in REREC and other public utilities facing similar challenges.

2.3.7 Summary of Literature Review and Research Gaps

Table 2.1: Summary of Literature Review and Research Gaps

Author/s	Focus of the Study	Key Findings	Research Gaps	How the Current Study Addresses the Gap
Ibrahim (2022)	Public financial management reforms in Nigeria	Effective planning and resource allocation enhance performance despite financial constraints.	Contextual gap: Findings based on Nigerian entities, not Kenya's energy sector	Analyzes funding effects on REREC's operational performance in the Kenyan energy context
Cheruiyot (2018)	PFM practices and performance of county governments in Kenya	Streamlined budgeting improves project execution and service delivery	Sectoral limitation: The Energy sector is not addressed	Assesses budgeting processes within REREC's operational performance
Banerjee et al. (2020).	E-governance and financial reforms in India	E-governance reduced financial leakages and improved accountability	Geographic limitation: No Kenyan energy sector data	Evaluates the financial reporting's role in REREC's performance
Wang et al. (2018).	Operational performance in the power industry	Funding and budgeting are closely tied to service reliability	Contextual gap: Generalized across regions, lacks Kenya-specific dynamics	Investigate funding and budgeting impact on REREC's operations
Owusu-Ansah (2015)	Financial reporting in the Ghanaian public sector	Strong reporting enhances operational efficiency	Contextual gap: Ghanaian focus; lacks insight into Kenyan	Study the financial reporting's influence on performance within REREC.

			public utilities	
Ndungu & Ngugi (2017)	Financial reporting in Kenyan public utilities	Timely reporting improves budget execution and project completion	Thematic limitation: No interaction with budgeting and funding practices	Integrates reporting, budgeting, and funding to evaluate their combined impact in REREC
Kiara (2019)	Infrastructure development in renewable energy in Kenya	Timely financial support is crucial for renewable project success	Thematic gap: Excludes budgeting and financial reporting considerations	Explores the comprehensive role of funding, budgeting, and reporting in REREC
Amuyunzu & Kisimbii (2020)	Government regulations and infrastructure projects in Kenya	Bureaucratic delays hinder budgeting processes	Sectoral limitation: No focus on the energy sector or reporting practices	Examines budgeting challenges and proposes improvements for REREC
Fisher (2022)	State and local public finance challenges	Misalignment of budgets with strategic goals results in inefficiencies	Geographic and sectoral limitation: Generalized and lacks energy sector focus	Aligns budgeting processes with REREC's strategic goals
George et al. (2019).	Strategic planning and budgeting in the public sector	Zero-based and participatory budgeting improve discipline and efficiency	Sectoral limitation: The Energy sector and reporting have not been explored	Proposes innovative budgeting methods to improve REREC performance
Sarkar & Singh (2020)	Financing energy efficiency in	Participatory budgeting enhances transparency and service delivery	Thematic gap: Reporting and integration with	Suggests participatory budgeting to support

	developing countries		other PFM elements are not considered	operational efficiency in REREC
Healy & Palepu (2021).	Financial reporting and efficiency in developed economies	Robust reporting systems improve resource allocation and performance monitoring	Geographic limitation: Focuses on developed contexts	Applies insights on reporting to the developing economy context of REREC
Dechow et al. (2020)..	Earnings quality in the private sector	High-quality reporting links to better efficiency and profitability	Sectoral limitation: Private sector focus; lacks public utility context	Highlights the role of reporting in enhancing REREC's operational performance
Francis et al. (2018)	Transparency in financial reporting	Reduces information asymmetry, improves decision-making, and outcomes	Thematic gap: Does not examine interaction with budgeting and funding	Integrates transparency in reporting with other PFM practices to assess the impact on REREC

Source: (Researcher, 2025)

2.4 Conceptual Framework

The conceptual framework for this research examined the relationships between public financial management practices and operational performance in Kenya's energy sector. The conceptual framework for this study examined the relationships between the independent variables (funding, budgeting processes, and financial reporting) and the dependent variable (operational performance in REREC).

2.4.1 Key Variables

2.4.1.1 Independent Variables

2.4.1.1.1 **Funding (X1):** The allocation and availability of financial resources for REREC's operations and projects.

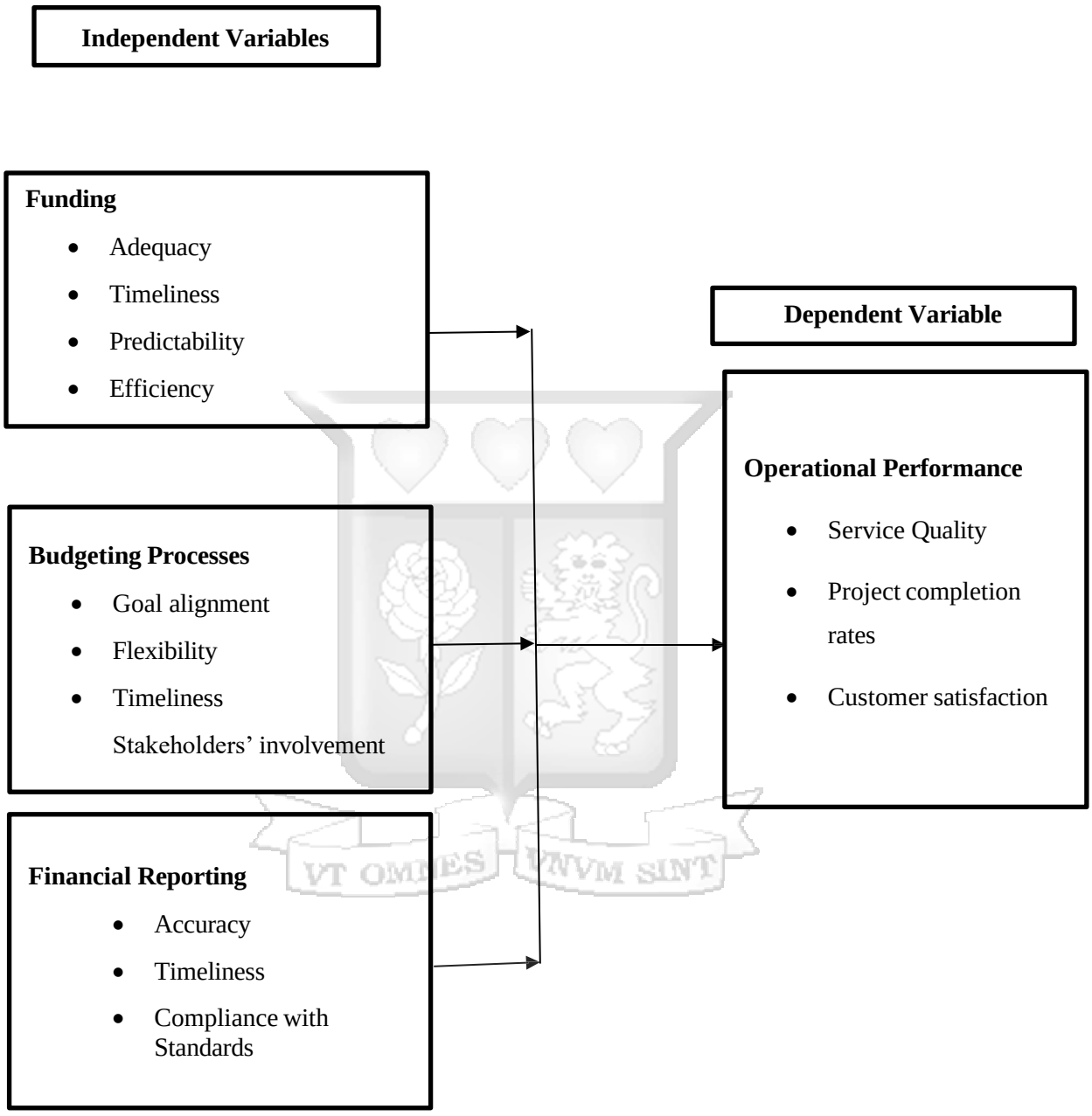
2.4.1.1.2 **Budgeting Processes (X2):** The efficiency and effectiveness of REREC's budgeting practices in aligning resources with strategic priorities.

2.4.1.1.3 Financial Reporting (X3): The transparency, accuracy, and timeliness of financial reporting mechanisms within REREC.

2.4.1.2 Dependent Variable

2.4.1.2.1 **Operational Performance (Y):** The efficiency and effectiveness of REREC in delivering energy services, measured by indicators such as project completion rates, service quality, and customer satisfaction.

Figure 2.1: Conceptual Framework



Source: (Researcher, 2025)

2.5 Operationalization and Explanation of the Variables

The operationalization of variables involves defining and measuring the key constructs of the independent and dependent variables to ensure clarity and consistency in the research. For this study, the independent variables, Funding, Budgeting Processes, and Financial Reporting, were operationalized through specific constructs that capture their impact on the dependent variable, Operational Performance. Funding was measured by factors such as funding adequacy, timeliness, predictability, and allocation efficiency, reflecting the availability and management of financial resources. Budgeting processes were operationalized through constructs like budget alignment with strategic goals, flexibility, approval timeliness, and stakeholder involvement, which assess the efficiency and effectiveness of budget planning and execution. Financial reporting was measured by constructs including timeliness, accuracy, transparency, and compliance with reporting standards, which evaluate the quality and reliability of financial information provided to stakeholders.

The dependent variable, Operational Performance, was operationalized through key performance indicators such as project completion rates, service quality, and customer satisfaction. These indicators comprehensively assess REREC's ability to deliver efficient and reliable energy services. Project completion rates measure the percentage of projects completed on time and within budget, reflecting the organization's efficiency in executing its mandate. Service quality is evaluated through metrics such as response time to power outages and the reliability of energy supply, while customer satisfaction is measured using stakeholder feedback and satisfaction surveys.

Table 2.2: Operationalization and Measurement of Variables

Variable	Construct	Adopted Definition	Measurement	Indicators	Supporting Literature
Independent Variable: Funding (X1)	Funding Adequacy	The sufficiency of financial resources allocated to REREC for operational and project needs.	Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)	Adequacy of funds for projects, timeliness of fund disbursement, and the predictability of funding streams	Ibrahim (2022); Wang et al. (2018); Kiara (2019)
	Funding Timeliness	How quickly funds are disbursed to avoid project delays.			
	Funding Predictability	The consistency of funding over time ensures long-term planning.			
	Funding Allocation Efficiency	How effectively funds are distributed across projects and departments.			
Independent Variable: Budgeting Processes (X2)	Budget Alignment with Strategic Goals	The extent to which the budgeting process aligns with REREC's strategic priorities and objectives.	Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)	Alignment of budget with strategic goals, flexibility to reallocate funds, and timeliness of budget approval	Cheruiyot (2018); George et al. (2019); Sarkar & Singh (2020)
	Budget Flexibility	The ability to reallocate funds to address unforeseen challenges.			
	Budget Approval Timeliness	The efficiency of the budget approval process.			

	Stakeholder Involvement in Budgeting	The level of stakeholder engagement in the budgeting process.			
Independent Variable: Financial Reporting (X3)	Transparency in Financial Reporting	The openness and clarity of financial information disclosed to stakeholders.	Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)	Timeliness of financial reports, accuracy of financial data, and compliance with reporting standards	Healy & Palepu (2021); Dechow et al. (2020); Banerjee et al. (2020)
	Accuracy of Financial Reporting	The correctness of financial data in reports.			
	Timeliness of Financial Reporting	How quickly financial reports are prepared and shared.			
	Compliance with Reporting Standards	Adherence to financial reporting regulations and standards.			
Dependent Variable: Operational Performance (Y)	Service Quality	The efficiency and effectiveness with which REREC delivers energy services to its customers.	Likert scale (1 = Poor to 5 = Excellent)	Percentage of projects completed on time, quality of energy services provided, and customer satisfaction satisfaction levels	Wang et al. (2018); Taouab & Issor (2019); Nyamongo & Nzuki (2019)
	Project Completion Rates	The percentage of projects completed on time and within budget.			
	Customer Satisfaction	Stakeholder satisfaction with REREC's services through surveys and feedback.			

Source: (Researcher, 2025)

2.5 Chapter Summary

This chapter thoroughly examined how strategic PFM affects utility companies' operational performance. The theoretical foundation rests on two primary theoretical frameworks: BSC and NPFM, which create a conceptual structure for analyzing the complex interactions between strategic management, public financial management, and operational outcomes in utility sectors. The empirical findings emphasize several key points: adequate funding plays a crucial role in operational efficiency, and implementing effective PFM practices significantly improves organizational performance. The chapter concludes by presenting a conceptual framework that examines the relationship between PFM practices and operational performance in Kenya's energy sector, proposing that these financial management approaches substantially impact operational outcomes in this context.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provided a systematic data collection, analysis, and interpretation approach. The chapter presents the research philosophy and approach, establishing the study's methodological framework. It then explains the research design, justifying the use of a quantitative, correlational approach. Additionally, the chapter describes the target population and sampling techniques, detailing how participants were selected to ensure representativeness. It then covered data collection procedures, focusing on developing and administering a structured questionnaire as the primary research instrument, and discusses the pilot study process for validating this instrument. Data analysis techniques, including descriptive statistics, are also outlined to illustrate how insights were drawn from the data. Additionally, measures to ensure data reliability and validity were described, along with ethical considerations to uphold research integrity and protect participant rights.

3.2 Research Philosophy

This study adopted the positivist research philosophy, which is grounded in the belief that reality is objective, measurable, and independent of the researcher. Alternative research paradigms, such as interpretivism, were ruled inappropriate for this study because they emphasize subjective understanding and contextual interpretation of social phenomena, which contrasts with this research's objective, which is quantitative. Similarly, pragmatism is adaptable, but it does not emphasize the rigorous hypothesis testing required to demonstrate observable correlations between variables, as required in this work.

Positivism holds that knowledge can be gained through observable and quantifiable facts and advocates for using scientific methods to establish relationships between variables (Creswell & Creswell, 2018). The justification for using this paradigm lies in the research problem, which examines and quantifies the influence of public financial management (PFM) practices, specifically funding, budgeting processes, and financial reporting, on operational performance at REREC.

Positivism was appropriate for this study because it allows the researcher to remain detached from the subject of investigation and rely on statistical tools to analyze data collected through structured instruments such as questionnaires. Given the study’s objective to draw empirical conclusions and

test hypotheses, a positivist paradigm ensures objectivity, replicability, and generalizability of findings. Moreover, by adhering to the positivist approach, the study emphasizes deductive reasoning, moving from theoretical frameworks (NPFM and BSC) to testing specific hypotheses about the relationship between variables in a real-world context.

The study's deductive approach followed the classical scientific method of moving from general theoretical concepts to specific testable propositions (Saunders et al., 2019). This top-down methodology began with established theories regarding strategic management of public financial management and operational performance, from which specific hypotheses were derived. As Pearse (2019) indicates, this approach starts with theoretical constructs that are subsequently tested through systematic observation and data collection. The hypotheses, formulated based on the theoretical framework established in Chapter Two, were subjected to rigorous quantitative analysis and testing.

3.3 Research Design

Research design is essential in any academic investigation, providing the structural framework for data collection and analysis. Creswell and Creswell (2018) characterize research design as the comprehensive set of methodologies and procedures employed to collect and analyze variables identified in the research problem. Functioning as a structural plan, it guides researchers through all investigative phases from data gathering through analysis to interpretation.

This study employed a descriptive cross-sectional research design. A descriptive design was chosen because it enables the researcher to accurately and systematically describe phenomena without manipulating variables (Hunziker & Blankenagel, 2024). In this case, the study describes the current state of PFM practices within REREC and how these practices influence its operational performance. The design aligns with the study’s intent to assess and explain the relationship between multiple variables using statistical analysis.

The cross-sectional nature of the design means that data were collected at a single point in time from a specific population, namely, managerial staff at REREC. Wang and Cheng (2020) notes that such approach is cost-effective, efficient, and suitable for examining associations between independent variables (funding, budgeting processes, and financial reporting) and the dependent variable (operational performance). The use of structured questionnaires ensured consistency in data collection, while statistical methods such as regression analysis enabled the researcher to identify patterns and relationships within the data.

3.4 Population and Sampling

As of 2024, REREC employs approximately 900 staff members across its national and regional operations. One hundred eighty-seven employees, including top-level executives, departmental heads, project managers, technical coordinators, and financial officers, occupy managerial positions. These individuals are actively involved in strategic planning, budgeting, resource allocation, and financial reporting. Therefore, the study targeted this specific managerial population of 187 as they were considered most knowledgeable on public financial management and operational performance (REREC, 2024).

The population for this study comprised all 187 managerial staff members of the REREC as of 2024. These individuals span top, middle, and lower management levels and are distributed among departments such as finance, operations, strategy, procurement, and technical services. This group was selected because of their direct involvement in activities related to public financial management practices and their roles in overseeing or executing operational functions within the organization.

Given their knowledge and involvement in financial and performance matters, these staff members were deemed most appropriate for responding to the structured questionnaire developed for this study. The unit of analysis was the individual managerial employee within REREC, whose perceptions and experiences formed the basis for analyzing the effect of PFM practices on operational performance.

Given the relatively small and accessible size of the target population, the study adopted a census approach, targeting all 187 managerial staff of REREC. This method ensured that comprehensive data could be collected from every individual involved in the organization's financial and operational management processes, thereby eliminating sampling bias and enhancing the reliability and validity of the findings.

3.5 Data Collection Methods

A comprehensive data collection approach utilized primary sources to gather relevant information on the strategic management of public financial management in REREC. Structured questionnaires were administered to sampled managers from the organizations as the primary data collection

method. These questionnaires were meticulously designed to capture critical information across four domains: demographic information of the respondents, their perceptions regarding funding adequacy within their respective organizations, current public financial management practices, and mitigation strategies. This approach provided first-hand insights from those directly involved in the strategic decision-making processes of these utility companies.

A structured, self-administered questionnaire was distributed in April 2025 through a mixed-mode strategy that included corporate e-mail, follow-up reminders and on-site support. This study's primary data collection instrument was a structured questionnaire to capture comprehensive information on the key variables: Funding, Budgeting Processes, Financial Reporting, and Operational Performance in REREC. The questionnaire was divided into four sections, each focusing on a specific aspect of the research. Section A collected demographic information from respondents, such as their age, gender, education level, position, and years of experience in the energy sector. Sections B, C, and D focused on the independent variables, with Section B addressing Funding, Section C addressing Budgeting Processes, and Section D addressing Financial Reporting. Each section used a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to measure respondents' perceptions of the adequacy, efficiency, and effectiveness of these PFM practices.

The questionnaire was designed to be comprehensive yet concise, with an estimated completion time of 10-15 minutes to maintain respondent engagement and minimize fatigue. Special attention was given to the wording and sequencing of questions to ensure clarity, avoid bias, and maximize the reliability of responses. Before full-scale administration, the questionnaire underwent expert review to ensure content validity and alignment with the study’s objectives.

The piloting phase of this study was crucial in validating the effectiveness and reliability of the questionnaire before full-scale implementation. We followed established research practices to determine an appropriate sample size for the pilot study. According to Connelly (2018), a pilot study sample should be 10% of the sample projected for the larger parent study. However, Hertzog (2018) suggests that 10-20% of the sample size of the main study is a reasonable number of participants to consider enrolling in a pilot. Given our main study sample size of 187, we aimed for a pilot sample of approximately 28-56 participants (10-20% of 187). This range aligns with the

recommendations in the literature and should provide sufficient data to assess the reliability and validity of our instrument. The pilot participants were selected from KPLC managers, distinct from the primary study sample, to avoid contamination of the main study data. These participants completed the questionnaire under conditions similar to those planned for the primary research. They provided detailed feedback on the questions' clarity, relevance, and comprehensiveness as well as the overall structure and flow of the instrument. After the pilot administration, the results were comprehensively analyzed. This included calculating Cronbach's alpha coefficients for each scale to assess internal consistency, with a threshold of 0.7 for acceptable reliability. The pilot data were subjected to preliminary statistical analyses to ensure that the questions elicit the data required to address the research questions.

3.6 Data Analysis

Data analysis was performed using IBM SPSS Version 29, a widely utilized software for statistical analysis in social sciences (Abu-Bader, 2021). The data analysis process for this quantitative study began with thorough data preparation. This initial phase involved editing the collected data to ensure accuracy and completeness, followed by coding to transform raw data into a format suitable for analysis. Data entry was performed meticulously, with double-entry or other verification methods to minimize errors. Once the data was prepared, it was subjected to a series of tests to ensure it met the statistical assumptions necessary for the planned analyses. These tests included checks for normality, linearity, independence, homogeneity of variance, and collinearity.

Descriptive statistics, such as measures of central tendency (mean, median) and dispersion (standard deviation, variance), were used to summarize the data and provide an overview of the respondents' perceptions and performance metrics. The primary analytical technique for this study was multiple regression analysis, which was appropriate for examining the relationships between multiple independent variables, that is, funding, budgeting processes, financial reporting, and a single dependent variable, operational performance.

3.6.1 Model Specification:

The multiple regression model was specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

- Y = Operational Performance (dependent variable)
- X_1 = Funding (independent variable)

- $X2$ = Budgeting Processes (independent variable)
- X_3 = Financial Reporting (independent variable)
- β_0 = Intercept
- $\beta_1, \beta_2, \beta_3$ = Regression coefficients for the independent variables
- ϵ = Error term

The regression analysis assessed the significance of each independent variable in explaining the variance in operational performance, using p-values with a threshold of 0.05 and t-statistics. The model's goodness of fit was evaluated using the R-squared value, which indicates the proportion of variance in the dependent variable explained by the independent variables. Additionally, ANOVA (Analysis of Variance) was used to test the overall significance of the regression model. Diagnostic tests such as residual analysis and multicollinearity checks (using Variance Inflation Factor, VIF) were conducted to ensure the robustness of the findings. The regression analysis results provided insights into the relative importance of funding, budgeting processes, and financial reporting in influencing REREC's operational performance, offering actionable recommendations for improving financial management practices in the energy sector.

3.7 Data Quality

Data quality is a critical aspect of research that ensures the study's findings' accuracy, reliability, and validity. According to Hair et al. (2019), data quality refers to the degree to which data are accurate, complete, consistent, and relevant to the research objectives. This study employed various measures to ensure data quality, focusing on two key aspects: reliability and validity. These measures were applied throughout the data collection and analysis processes to minimize errors and biases, enhancing the credibility and trustworthiness of the research findings.

3.7.1 Reliability

Reliability in research refers to the consistency and stability of measurements over time and across different conditions (Heale & Twycross, 2015). The reliability test used Cronbach's alpha to measure internal consistency among the study variables. All three variables exceeded the acceptable threshold of 0.7 (Izah et al., 2023), indicating strong reliability. Funding scored highest, 0.863, suggesting excellent consistency among funding-related questions. Budgeting followed with 0.829, showing strong coherence in the budgeting process items. Financial reporting scored 0.775,

still well above the threshold. These values confirm that the measurement instruments were reliable, meaning respondents consistently understood questions in each category similarly. Strong reliability enhances the credibility of the findings by ensuring that the questionnaire items effectively measure what they were intended to measure.

The reliability of the data was checked using Cronbach's alpha (Table 3.1), shown below.

Table 3.1 Reliability test

Constructs	Cronbach's Alpha	Number of Items
Funding	0.863	4
Budgeting	0.828677	4
Financial Reporting	0.774531	4

Source: (Researcher, 2025)

3.7.2 Validity

Validity in research refers to the extent to which a concept is accurately measured in a quantitative study (Heale & Twycross, 2015).

KMO Bartlett's Test for Validity

Table 3.2 presents an analysis supporting factor analysis, a statistical technique that reduces many variables into a smaller set of underlying factors. The Kaiser-Meyer-Olkin (KMO) measure, which assesses sampling adequacy for factor analysis, scored 0.934, indicating exceptional suitability (Zhang et al., 2024). KMO values range from 0 to 1, with values above 0.9 considered "marvelous," suggesting an ideal data structure for identifying underlying factors. Bartlett's Test of Sphericity, which tests the hypothesis that the variables are uncorrelated in the population, yielded a significant chi-square value (1057.87, df = 66, $p < 0.001$). A chi-square is a statistical test used to compare observed and expected results. The degrees of freedom (df) relate to the number of independent pieces of information that went into calculating the estimate.

A p-value is the probability of obtaining test results at least as extreme as the results observed, assuming that the null hypothesis is correct. The test result is significant because $p < 0.001$, where the p-value is less than the significance level $\alpha = 0.05$. This allowed for the rejection of the null hypothesis that the variables are uncorrelated and confirms the presence of significant relationships among variables, validating that factor analysis is appropriate. Together, these results strongly

support the construct validity of the study instrument, meaning it effectively measures the intended public financial management practices. This validates the study's analytical approach and strengthens confidence in the findings, indicating that the dataset is suitable for exploring the effects of public financial management (PFM) practices on the operational performance of REREC in Kenya.

Table 3.2: Validity Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.934448
Bartlett's Test of Sphericity	Approx. Chi-Square	1057.871853
	Df	66.000000
	Sig.	<.001

Constructs	**KMO**	**Approx. Chi-Square**	**Df**	**Sig.**
Funding	0.91453	1024.67346	65.000	0.0103614
Budgeting	0.89453	1022.81572	61.000	0.0106057
Financial Reporting	0.93445	1051.65348	63.000	0.0103614

Source: (Researcher, 2025)

3.7.3 Normality Test

A normality test was used to assess whether the data follow a normal distribution, a key assumption in many parametric statistical tests such as t-tests, ANOVA, and regression analysis. When data is normally distributed, it displays a symmetric, bell-shaped curve with most values clustering around the mean. Testing for normality is essential because non-normal data can lead to biased estimates and invalid conclusions in analyses relying on parametric methods. Standard techniques for testing normality include visual methods, such as histograms and Q-Q (quantile-quantile) plots, and statistical tests like the Shapiro-Wilk and Kolmogorov-Smirnov tests. In the Shapiro-Wilk test, a p-value greater than a chosen significance level (often 0.05) suggests the data is usually distributed.

3.8 Ethical Considerations

The study adhered to strict ethical guidelines to ensure the protection of all participants and fair treatment. Paramount among these considerations was the principle of informed consent. Informed consent is a fundamental principle of research ethics that requires researchers to fully inform potential participants about the details of a study and their role in it before they can participate (Bazzano et al., 2021). Before involvement, all participants were provided comprehensive information about the study's purpose, methodology, and potential implications. They were made explicitly aware of their right to withdraw from the study at any point without any negative consequences.

Confidentiality and data protection formed another crucial ethical pillar of this research. As noted by Indriasari and Karman (2023), confidentiality is the obligation of researchers to prevent unauthorized access to data collected from participants, while data protection involves storing and managing data securely and disposing of it safely when it is no longer needed. Therefore, the identities of all participants were rigorously protected through anonymization techniques, and all collected data were stored securely with access restricted to authorized research personnel only. Additionally, the study operated strictly voluntarily with no coercion or undue influence in the recruitment process.

Before commencing the research, formal institutional approval was sought from the management of the REREC. Balon et al. (2019) define formal institutional approval in research as a critical step that ensures the study complies with organizational policies, maintains ethical standards, and respects the interests of the institutions involved. This step ensures organizational support and compliance with internal policies. Furthermore, the study adhered to the guidelines set by Strathmore University's Institutional Review Board (IRB), the American Psychological Association (APA) principles, and the National Council for Science and Technology (NACOSTI).

3.9 Chapter Summary

The chapter outlines the research methodology employed in the study, detailing the systematic approach to data collection, analysis, and interpretation. The study adopts a positivist research philosophy with a deductive approach, utilizing a quantitative approach. The target population consists of managerial-level employees within REREC, and a stratified random sampling technique was used to select a representative sample of 187 respondents. Data was collected through self-administered structured questionnaires to capture information on funding, budgeting

processes, financial reporting, and operational performance. Data analysis was performed using IBM SPSS Version 29, beginning with descriptive statistics to summarize the data and assess its distribution. The regression model was tested for goodness of fit using R-squared values and ANOVA.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents data analysis and a discussion of the study findings, and investigates the effects of public financial management practices on the operational performance of the REREC in Kenya. Data analysis used descriptive statistics with a statistical package for social scientists (SPSS). The chapter presents the research findings organized into the following sections: Data preparation, which includes reliability and validity tests, response rate, demographic characteristics of the respondents, and descriptive statistics.

4.2 Descriptive Statistics

4.2.1 Response Rate

The study targeted 187 respondents, with 150 completing the questionnaires, resulting in an 80.21% response rate. While this rate is considered excellent according to Wu et al. (2022), who suggest that a response of more than 70% is commendable in research, it was important to acknowledge and explore the reasons behind the 19.79% non-response rate, consisting of 37 individuals, and its potential implications.

The reasons for non-response included time constraints experienced by managerial staff due to work commitments, a lack of perceived relevance of the study to some individuals' roles or the organization, technical issues related to survey distribution or access, and confidentiality concerns that made some staff hesitant to share information about financial management practices. To better understand the potential for non-response bias, an analysis was conducted on the non-respondents to determine if they share common demographic traits or organizational roles, comparing characteristics of respondents and non-respondents based on available data such as department, job level, or years of experience. No significant differences were found, with the achieved response rate, which ensured a

A representative sample contributed to the study's validity and reliability, and acknowledging and analyzing the non-response rate adds depth to the discussion, demonstrating a thorough approach to data collection and interpretation, enhancing the credibility of the research findings and recommendations.

Table 4.1: Response Rate

Category	Frequency	Percentage
Targeted	187	100%
Responded	150	80.21%
Non-responded	37	19.79%

Source: (Researcher, 2025*)*

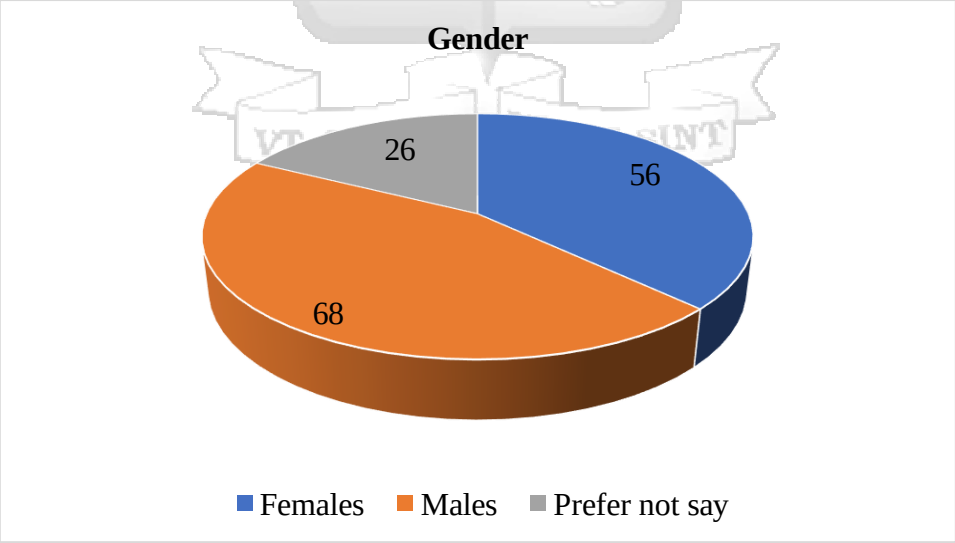
4.2.2 Demographic Profile of Respondents

The biodata characteristics collected included gender, Age Group, Highest Level of Education, Current Position, and years of experience in the Energy Sector. This section is necessary for the study since it helped establish the association between information obtained on the strategic management of public financial management practices, and their importance on operational performance in REREC and demographic attributes.

Respondents' Gender

The researcher sought to establish the gender of the respondents. The respondents were asked to state their gender. Out of 150 respondents, 56 were females, 68 were males, while 26 preferred not to say their gender. Figure 4.1 gives a graphical description of the respondents regarding their gender.

Figure 4.1: Respondents' Gender



Source: (Researcher, 2025)

The study results shown in Figure 4.1 above indicate a relatively balanced gender representation with a slight male majority. The significant number of respondents who preferred not to disclose their gender (17.3%) suggests either sensitivity around gender identification in the organization or

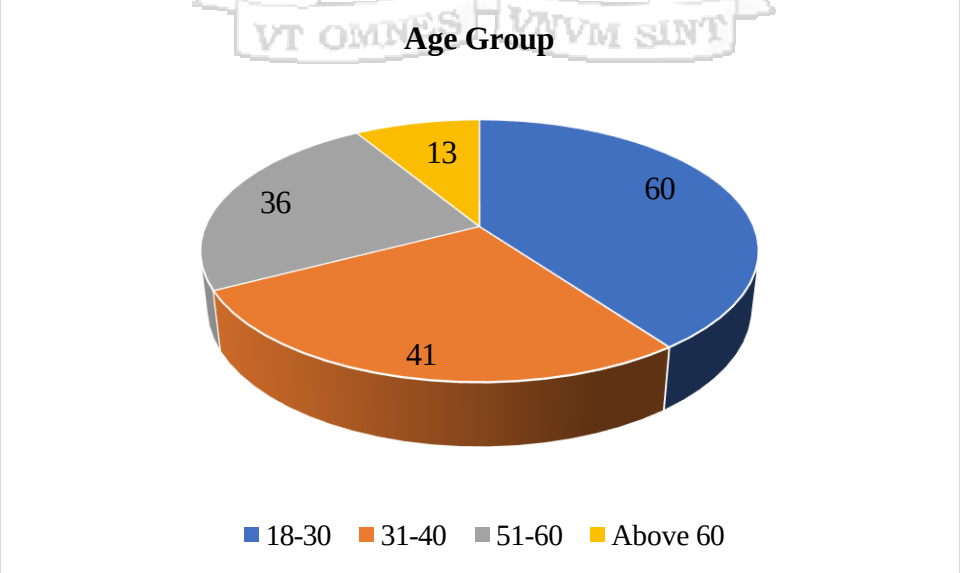
potentially a cultural aspect in the Kenyan energy sector workplace. The fairly balanced gender representation, with a slight male majority, suggests that both male and female perspectives were incorporated into evaluating PFM practices. This diversity enhances the inclusivity and credibility of the findings, reflecting varied managerial experiences and decision-making approaches in financial management and operational performance across REREC.

Age Group

The study sought to establish whether the respondents' age group contributed to the effectiveness of the demographic data collected for the study. Out of 150 respondents, 60 of the participants were between the age groups of 18-30, 41 of the participants were between the age groups of 31-40, 36 of the participants were between the age groups of 51-60, and 13 of the participants were between the age groups of above 60.

Figure 4.2 describes the age of the respondent. The predominance of younger respondents, especially those aged 18–30, indicates a youthful managerial workforce. This demographic may be more adaptive to modern PFM technologies and reforms. Their views are vital, as they represent the future of public sector financial management and are key to sustaining institutional performance improvements.

Figure 4.2: Age Group



Source: (Researcher, 2025)

Highest Level of Education of the Respondents

The level of education influences how individuals view and respond to/understand various issues regarding Rural Electrification and Renewable Energy Corporation (REREC). The study needed to know the highest level of education of the participants. The findings are as analyzed in Table 4.2 below.

Table 4.2: Education Level

Education Level	Frequency	Percentage
Certificate	7	4.7%
Diploma	19	12.7%
Bachelor's Degree	74	49.7%
Master's Degree	28	18.8%
PhD	21	14.1%
Total	**149**	**100%**

Source: (Researcher, 2025)

As shown in Table 4.3 above, this indicates a highly educated workforce with 67.1% having at least a Bachelor's degree. The significant proportion of advanced degree holders (32.9% with Master's or PhD suggests that REREC employs professionals with substantial academic qualifications, which could positively influence the understanding and implementation of public financial management practices. Most respondents held advanced academic qualifications, such as bachelor's and master's degrees. This high level of education implies respondents possess the theoretical and technical knowledge necessary to understand and implement complex PFM practices. Their feedback lends reliability to the study, offering well-informed perspectives on budgeting, funding, and financial reporting.

Current Position

The researcher sought to establish the current position held by the participant in the energy sector. The findings are as analyzed in Table 4.3 and below;

Table 4.3: Current position of Respondents

Current position	Frequency	Percentage
Top Management	42	28.4%
Middle Management	47	31.8%
Lower Management	59	39.9%
Total	**148**	**100%**

Source: (Researcher, 2025)

From the table above, the data reveals that Lower Management constituted the largest group at 39.9% (59 respondents), followed by Middle Management at 31.8% (47 respondents) and Top Management at 28.4% (42 respondents). This distribution shows a pyramidal organizational structure with a broader base of lower management. The relatively high proportion of top management respondents (28.4%) suggested good representation of decision-makers in the study.

Years of Experience in the Energy Sector

The study sought to establish the years of experience held by the respondents to determine the effectiveness and efficiency of the information provided. The findings are illustrated in the table below;

Table 4.4: Years of Experience in the Energy Sector

Years of Experience in the Energy Sector	Frequency	Percentage
Less Than 5 Years	57	38 %
5 – 10	39	26%
11 -15	32	21.3%
More Than 20 Years	22	14.7%
Total	**150**	**100%**

Source: (Researcher, 2025)

From table 4.4, above, the findings show that 38% (57 respondents) had less than 5 years of experience, 26% (39 respondents) had 5-10 years, 21.3% (32 respondents) had 11-15 years and 14.7% (22 respondents) had more than 20 years of experience. This indicates that most employees (64%) had 10 years or less of experience in the energy sector. The significant proportion of

employees with limited experience (less than 5 years) suggests a relatively high recent recruitment rate or potential turnover. The presence of experienced professionals (more than 20 years) provides valuable institutional knowledge.

The demographic findings of the study provided crucial context that adds depth and validity to the overall research outcomes. The excellent response rate of 80.21% indicates strong engagement from participants and supports the reliability and representativeness of the data. The balanced gender distribution reflects inclusivity and a workplace accommodating diverse identities, although the notable number preferring anonymity may suggest underlying cultural or organizational sensitivities. Age-wise, the predominance of respondents aged 18–30 (40%) reveals a youthful workforce, which may be more adaptable to change and new technologies, especially in adopting innovative public financial management (PFM) systems.

However, the relatively limited experience among this group could pose challenges in managing complex financial processes. Educationally, the workforce is highly qualified. This suggests a strong potential for practical understanding and application of advanced financial management practices within REREC. The spread across management levels ensures that insights are captured from both operational and strategic viewpoints, enhancing the richness of the data. Additionally, the fact that 64% of respondents had 10 years or less of experience highlights a relatively new workforce, indicating a need for mentorship and institutional knowledge transfer. Collectively, these demographic implications underscore the need for capacity building, targeted training, and leadership development to support effective PFM practices and improve REREC's operational performance.

4.2.3 Frequency Distributions

Analyzing measures' frequency distributions provides valuable insights into the effectiveness of PFM practices at REREC. This study focused on three key components of PFM: funding, budgeting processes, and financial reporting. We examined the influence of these variables on REREC's ability to deliver efficient and reliable energy services.

Funding

The researcher sought to establish the influence of funding on operational performance in REREC. The research also sought to answer the question of the influence of funding on the operational

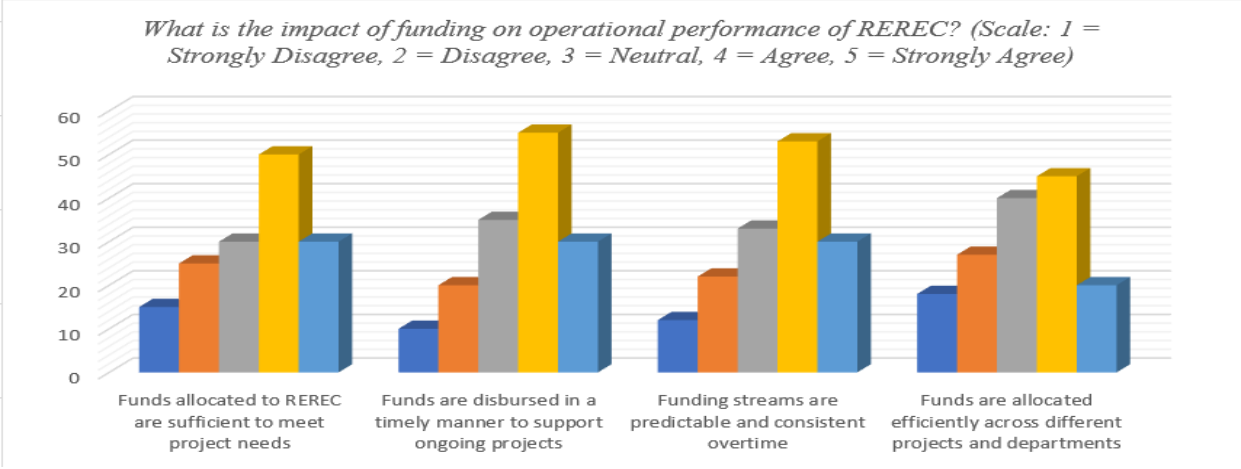
performance of REREC. The respondents were asked about their level of understanding of different fund disciplines, such as timely disbursement, sufficiency, and operational performance of REREC, and the results are shown in Table 4.5 below.

Table 4.5: Funding and Operational Performance of REREC

Statement	N	Mean	Std Dev
Funds allocated to REREC are sufficient to meet project needs	150	2.63	1.255
Funds are disbursed promptly to support ongoing projects	150	2.50	1.151
Funding Streams are predictable and consistent over time	150	2.55	1.196
Funds are allocated efficiently across different projects and departments	150	2.85	1.217

Source: (Researcher, 2025)

Figure 4.3 Funding



From Table 4.5 above, the survey data reveals nuanced insights into how funding practices affect REREC's operational performance. With a composite mean of 2.6350, funding shows a moderately positive influence overall, though with significant variation across specific dimensions. The sufficiency of funds is a key determinant of REREC's capacity to implement projects effectively. According to the survey results, only 10% of respondents strongly agreed that REREC receives adequate project funding, while 16.7% agreed. However, 20% remained neutral, and 53.3% (33.3% disagreed and 20% strongly disagreed) believed the funds allocated were insufficient. The mean score for this factor was 2.63, with a standard deviation of 1.255, indicating a generally

negative perception of funding adequacy among respondents. The implications of insufficient funding are far-reaching. Delays in project implementation, increased operational costs, and compromised service delivery are common consequences of inadequate financial resources. REREC may struggle to meet Kenya's electrification goals when funding falls short, particularly in rural areas where infrastructure development is capital-intensive. The findings suggest a need for improved budgetary planning and advocacy for increased government or donor funding to bridge financial gaps.

The timing of fund disbursement is crucial in ensuring that ongoing projects do not experience unnecessary delays. The results indicate that only 6.7% of respondents strongly agreed and 13.3% agreed that funds are disbursed on time. Meanwhile, 23.3% were neutral, and a substantial 56.7% (36.7% disagreed and 20% strongly disagreed) felt that delays in fund disbursement negatively impact project execution. The mean score for this variable was 2.50 with a standard deviation of 1.151, further emphasizing concerns about inconsistent financial flows. Delays in disbursing funds can lead to stalled projects, cost overruns, and inefficiencies in operations. For a corporation like REREC, which operates in a sector requiring continuous investment in infrastructure, late funding can hinder expansion efforts, reduce investor confidence, and affect overall service reliability. Addressing these delays would require streamlining approval processes, reducing bureaucratic bottlenecks, and adopting automated financial management systems to enhance efficiency.

A stable and predictable funding stream allows organizations to plan long-term projects confidently. However, the study findings suggest a significant concern regarding the predictability of funding for REREC. Only 8% of respondents strongly agreed and 14.7% agreed that funding is predictable, whereas 22% remained neutral. A notable 55.3% (35.3% disagreed and 20% strongly disagreed) indicated that funding inconsistencies challenge REREC's financial planning. The mean score was 2.55, with a standard deviation of 1.196, reinforcing the perception that unpredictable financial support hinders operational stability. Unreliable funding streams can severely affect infrastructure projects, particularly those requiring phased implementation over multiple years. Uncertainty in financial support can lead to incomplete projects, contract disputes, and difficulties in workforce planning. To mitigate this, REREC could explore diversified revenue sources such as public-private partnerships (PPPs) and alternative financing models, including green energy grants and concessional loans.

Efficient allocation of funds ensures that resources are directed toward priority areas, maximizing impact and minimizing waste. The survey results reveal a relatively better perception of fund allocation than other funding variables. 12% of respondents strongly agreed, and 18% agreed that funds are allocated efficiently across projects and departments. Meanwhile, 26.7% remained neutral, while 43.3% (30% disagreed and 13.3% strongly disagreed) believed that inefficiencies exist in how funds are distributed. The mean score for this factor was 2.85, with a standard deviation of 1.217. Although this score is slightly higher than the other funding variables, it still indicates room for improvement. Poor fund allocation can result in resource mismanagement, favoritism in project selection, and failure to address urgent needs. A well-structured financial oversight framework is necessary to ensure that REREC prioritizes projects based on impact and sustainability.

Budgeting Processes

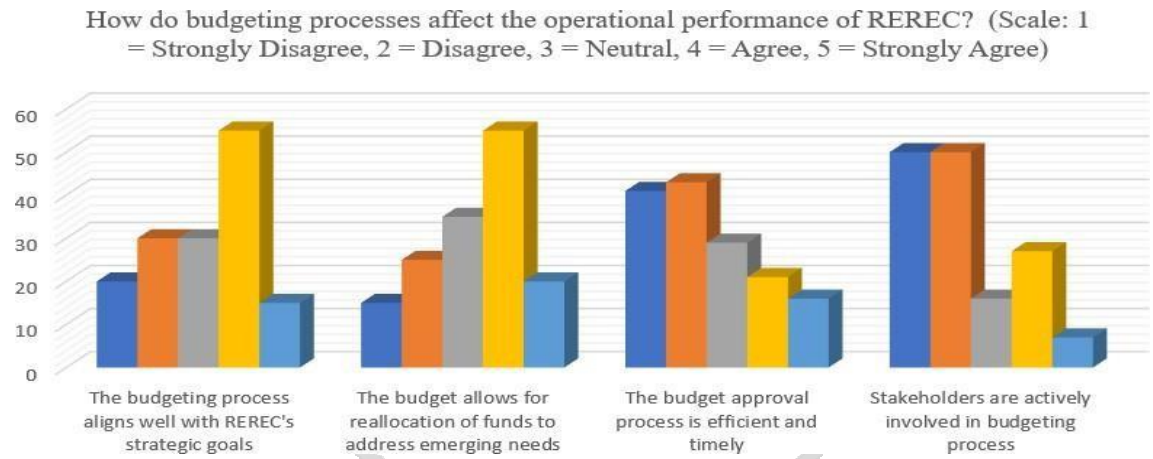
The researcher sought to examine the effect of budgeting processes on operational performance in REREC. The research also investigated how budgeting processes affect the operational performance of REREC. The respondents were asked about their understanding of different budgeting processes, such as budgeting alignment with strategic goals, its efficiency, and the timely and operational performance of REREC. The results are shown in Table 4.6 below.

Table 4.6: Budgeting Processes and Operational Performance of REREC

Statement	N	Mean	Std Deviation
The budgeting process aligns well with REREC's strategic goals	150	2.90	1.225
The budget allows for reallocation of funds to address emerging needs	150	2.73	1.185
The budget approval process is efficient and timely	150	3.48	1.314
Stakeholders are actively involved in the budgeting process	150	3.73	1.231

Source: (Researcher, 2025)

Figure 4.4 Budgeting Processes



From the table above, the analysis of budgeting processes at REREC reveals significant insights into how these practices influence operational effectiveness. With an overall mean of 3.2100, budgeting processes demonstrate a substantial positive impact on organizational performance, though with notable variations across specific dimensions. For budgeting to be effective, it must align with an organization's long-term strategic objectives. The survey findings indicate that only 13.3% of respondents strongly agreed and 20% agreed that REREC's budgeting process aligns well with its strategic goals. Meanwhile, 20% remained neutral, and 46.7% (36.7% disagreed and 10% strongly disagreed) believed that the budgeting process does not effectively support REREC's strategic direction. The mean score of 2.90, with a standard deviation of 1.225, suggests a lack of strong confidence in the alignment between budgeting and strategic objectives.

A misaligned budgeting process can lead to inefficient resource utilization, project delays, and failure to achieve key electrification targets. REREC should implement performance-based budgeting to improve this, ensuring that resource allocation directly supports priority projects and policy goals. A well-structured budgeting process should allow for adjustments to accommodate unforeseen financial needs. The results show that only 10% of respondents strongly agreed and 16.7% agreed that REREC's budgeting process allows for fund reallocation. However, 23.3% were neutral, while 50% (36.7% disagreed and 13.3% strongly disagreed) felt there was little flexibility in reallocating funds to address emerging priorities. The mean score of 2.73, with a standard deviation of 1.185, indicates a general perception that REREC's budgeting lacks adaptability. A

rigid budgeting process limits the organization's ability to respond effectively to emergencies such as infrastructure failures or unexpected cost increases. REREC should consider introducing a contingency fund within its budget to improve financial agility.

Delays in budget approvals can significantly impact project execution and operational efficiency. Encouragingly, the study found that 27.3% of respondents strongly agreed and 28.7% agreed that REREC's budget approval process is efficient and timely. 19.3% remained neutral, while 24.7% (14% disagreed and 10.7% strongly disagreed) believed the process is slow or inefficient. The mean score of 3.48, with a standard deviation of 1.314, suggests a moderate confidence level in the budget approval process. While this is a relatively positive result compared to other budgeting factors, further streamlining of the approval process could enhance operational efficiency. Implementing automated budgeting systems and reducing bureaucratic bottlenecks can help improve approval timelines.

Stakeholder participation is essential for ensuring transparency, accountability, and the prioritization of projects that align with community needs. The study findings indicate that 33.3% of respondents strongly agreed and 33.3% agreed that stakeholders are actively involved in the budgeting process. Meanwhile, 10.7% remained neutral, while 22.7% (18% disagreed and 4.7% strongly disagreed) felt that stakeholder engagement is insufficient. The mean score of 3.73, with a standard deviation of 1.231, suggests a generally positive perception of stakeholder involvement. The relatively high level of agreement on this aspect indicates that REREC has made efforts to engage stakeholders. However, further improvements, such as public consultations, participatory budgeting workshops, and enhanced transparency in budget allocations, could further strengthen stakeholder trust and collaboration.

Financial Reporting

The researcher sought to assess the impact of financial reporting on operational performance in REREC. The research also investigated the impact of financial reporting on the operational performance of REREC. The respondents were asked about their understanding/ knowledge of financial reporting measures such as timely submission of financial reports, their accuracy and errors, transparency, and operational performance of REREC. The results are shown in Table 4.7 below.

Table 4.7: Financial Reporting and Performance

Statement	N	Mean	Std Dev
Financial reports are submitted on time.	150	3.49	1.219
Financial reports are accurate and free from errors	150	3.14	1.248
Financial information is transparent and easily accessible to stakeholders.	150	2.67	1.224
REREC complies with national and international financial reporting standards	150	2.77	1.338

Source: (Survey Data, 2025)

Figure 4.5 Financial Reporting

Source: (Survey Data, 2025)

From the table and figure above, the analysis of financial reporting practices at REREC reveals significant insights into how reporting quality influences organizational effectiveness. With an overall mean of 3.0167, financial reporting demonstrates a positive impact among all PFM dimensions studied, though with notable variations across specific reporting aspects.

Timely submission of financial reports is essential for ensuring that management and stakeholders have up-to-date information for decision-making. The results show that 23.3% of respondents strongly agreed and 33.3% agreed that financial reports at REREC are submitted on time. Meanwhile, 16% remained neutral, and 26.7% (21.3% disagreed and 5.4% strongly disagreed) expressed concerns about delays in financial reporting. The mean score of 3.49 with a standard deviation of 1.219 indicates a moderately positive perception of timeliness. While these results

suggest that financial reports are generally submitted on time, the significant proportion of respondents who disagreed highlights room for improvement. Delays in financial reporting can lead to poor decision-making, inefficiencies, and compliance issues. REREC should focus on streamlining its financial reporting processes through automation and strict adherence to reporting deadlines.

The accuracy of financial reports is fundamental to maintaining credibility and ensuring effective resource allocation. The study found that 19.4% of respondents strongly agreed and 20% agreed that REREC's financial reports are accurate and error-free. However, 23.3% remained neutral, while 43.3% (30% disagreed and 13.3% strongly disagreed) raised concerns about report accuracy. The mean score of 3.14, with a standard deviation of 1.248, suggests that while financial reports are perceived as generally accurate, significant doubts remain. Inaccurate financial reporting can lead to misallocating funds, financial inefficiencies, and loss of stakeholder confidence. REREC should strengthen its financial controls, implement rigorous auditing mechanisms, and invest in staff training to improve report accuracy.

Transparency in financial reporting ensures that stakeholders, including government agencies, investors, and the public, can access and assess financial information. However, the study found that only 10% of respondents strongly agreed and 16.7% agreed that financial information is transparent and easily accessible. A notable 20% remained neutral, while a significant 53.4% (36.7% disagreed and 16.7% strongly disagreed) believed financial transparency at REREC is inadequate. The mean score of 2.67 with a standard deviation of 1.224 suggests widespread concerns about financial disclosure. Lack of transparency can lead to financial mismanagement, corruption risks, and reduced stakeholder trust. REREC should improve its financial disclosure policies, ensure that financial reports are easily accessible, and enhance stakeholder communication.

Compliance with national and international financial reporting standards is essential for ensuring financial integrity and credibility. The study found that 13.3% of respondents strongly agreed and 20% agreed that REREC complies with financial reporting standards. However, 16.7% remained neutral, and 50% (30% disagreed and 20% strongly disagreed) expressed concerns about non-compliance. The mean score of 2.77 with a standard deviation of 1.338 highlights concern about adherence to financial reporting regulations. Non-compliance with financial standards can result

in regulatory penalties, loss of investor confidence, and operational inefficiencies. REREC should implement stricter internal audit mechanisms to address this, enhance staff training on financial regulations, and seek external financial audits for increased accountability.

The analysis below provides descriptive statistics that offer valuable insights into the effectiveness of how funding, budgeting processes, and financial reporting influence REREC's ability to deliver efficient and reliable energy services. This study further assessed three strategies: funding, budgeting processes, and financial reporting, three key components of PFM. The mean scores for each of these methods, ranging from 2.6350 to 3.0167, are illustrated in the table 4.8 Below;

Table 4.8: Descriptive Statistics Summary

Descriptive Statistics			
Constructs	**Mean**	**Std. Deviation**	**N**
Funding	2.6350	.62433	150
Budgeting Process	3.2100	.60346	150
Financial Reporting	3.0167	.56437	150

Source: (Researcher, 2025)

The descriptive statistics above summarize the data collected from respondents and provide an overall picture of the distribution, central tendencies, and variability in the data (Mishra et al., 2019). The study utilized the mean, standard deviation, and range to evaluate how respondents perceive the adequacy of funding, efficiency of budgeting processes, and effectiveness of financial reporting in improving operational performance. The mean score for funding was 2.635, indicating that respondents perceived funding as a moderately influential factor in operational performance. This suggests that while funding is a critical financial management component, it may not be allocated or disbursed efficiently to meet operational needs. The standard deviation of 0.624 indicates a moderate variation in responses, implying that while some respondents believe funding plays a significant role, others perceive challenges such as delays in disbursement, inadequacy of financial resources, and unpredictable funding streams.

The mean score for budgeting processes was 3.210, reflecting a higher perception of budgeting effectiveness than funding. This suggests that REREC has structured budgeting mechanisms that align with operational objectives. However, inefficiencies in budget approvals, misaligned

financial planning, and bureaucratic delays could still impact performance. A standard deviation of 0.603 indicates a moderate dispersion of responses regarding budgeting effectiveness, suggesting varying experiences among respondents. While the mean suggests a consensus on budgeting's effectiveness (mean = 3.60), the standard deviation reveals that some respondents view budgeting practices as far more effective or ineffective than others. This could stem from differences in departmental practices, levels of involvement in budgeting processes, or varying perceptions of resource allocation and budget adherence within REREC.

The mean score for financial reporting was 3.016, making it the most impactful PFM component in the study. Respondents viewed financial reporting as a crucial driver of operational efficiency, emphasizing its role in enhancing transparency, accountability, and compliance with reporting standards. The relatively low standard deviation of 0.564 suggests a higher level of agreement among respondents regarding the effectiveness of financial reporting. This consistency in responses highlights that transparent and accurate financial reporting is fundamental to improving service delivery and financial management at REREC.

The pattern of mean scores reveals a progressive relationship: effective financial reporting supports better budgeting processes, improving funding utilization. This interconnection highlights the systemic nature of PFM practices, where strengthening one component positively influences others. These statistics confirm that REREC's implementation of PFM practices positively contributes to its operational performance. The proximity of mean scores suggests a relatively balanced approach to PFM, though with room for improvement in all areas, particularly funding. For REREC to enhance its operational performance further, targeted interventions to address the specific challenges in each component would be beneficial.

4.3 Inferential Statistics

Inferential statistics play a crucial role in research by enabling the generalization of findings from a sample to a larger population. According to Marshall and Jonker (2021), inferential statistics helps researchers make predictions, establish relationships between variables, and test hypotheses with a level of statistical confidence. This study employed inferential statistics to analyze how public financial management (PFM) practices, including funding, budgeting processes, and financial reporting, affect operational performance at REREC.

4.3.1 Normality Test

A normality test is a crucial step in statistical analysis to determine whether the collected data follows a normal distribution. Many inferential statistical techniques, such as regression analysis,

t-tests, and ANOVA, assume that data is usually distributed. Ensuring normality enhances the accuracy and reliability of statistical conclusions (Cooksey et al., 2020). In this study, normality was tested using the Shapiro-Wilk test and the Kolmogorov-Smirnov test. These tests assess whether the dataset significantly deviates from a normal distribution. A p-value greater than 0.05 in these tests suggests that the data is usually distributed, while a p-value below 0.05 indicates a violation of normality assumptions.

Table 4.9 Normality Test

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
Constructs	**Statistic**	**Df**	**Sig.**	**Statistic**	**Df**	**Sig.**
Funding	0.065	150	0.2	0.988	150	0.218
Budgeting Process	0.071	150	0.062	0.991	150	0.412
Financial Reports Process	0.058	150	0.2	0.985	150	0.107
Operation Performance	0.096	150	0.202	0.983	150	0.161

Source: (Researcher, 2025)

The study demonstrates consistent normality across all variables examined, as shown in Table 4.11. The "Funding" variable exhibits strong normality with non-significant test results (K-S p=0.200; S-W p=0.218), indicating the distribution closely approximates the Gaussian ideal. Similarly, the "Budgeting process" variable confirms normality with K-S p=0.062 and S-W p=0.412, exceeding the conventional 0.05 threshold. These findings suggest that observations follow symmetrical distribution patterns with predictable behavior around the mean values. The "Financial reports process" variable further validates normality assumptions with K-S p=0.200 and S-W p=0.107, reinforcing that response patterns for this construct align with normal distribution expectations. Most notably, Operation performance" indicates normality with both tests showing non-significant results (K-S p=0.202; S-W p=0.161). Hence, the null hypothesis (H_0), which assumes normality, is supported, while the alternative hypothesis (H_1), indicating normality, is not supported. The consistent normality observed across all four variables establishes a strong methodological foundation for the research, fully justifying the application of parametric statistical techniques in subsequent analyses.

4.3.3 Multicollinearity Assessment

The multicollinearity assessment presented in Table 4.12 systematically evaluates the independence among predictor variables in the model, examining the relationships between all public financial management practices and REREC's operational performance. Using established diagnostics of tolerance and Variance Inflation Factor (VIF), the analysis reveals important insights about the correlation structure among predictors, as supported by Mahmood et al. (2024)

Table 4.10 Collinearity Statistics

Model	Collinearity Statistics	
	Tolerance	**VIF**
(Constant)	.487	2.527
Funding	.362	2.754
Budgeting	.592	1.788
Financial Reporting	.487	2.527

Results revealed moderate levels of multicollinearity among the three financial management dimensions. The Funding variable demonstrates a Tolerance value of 0.487 (VIF=2.527), indicating approximately 51.3% of its variance can be explained by other predictors in the model. This suggests substantial but not excessive shared variance. More concerning is the Budgeting variable with a Tolerance value of 0.362 (VIF=2.754). It reveals that about 63.8% of its variance overlaps with other predictors, approaching levels that warrant methodological attention, though still within acceptable limits for regression analysis. Financial Reporting exhibits the strongest. Independence with a Tolerance value of 0.592 (VIF=1.788), with approximately 40.8% of its variance explained by other predictors. These multicollinearity indicators fall within an interpretive middle ground, not severe enough to invalidate the analysis (conventional thresholds suggest concern at Tolerance<0.1 or VIF>10), influencing regression coefficient stability and interpretation.

4.3.4 Heteroscedasticity

Table 4.11 Residuals Statistic[a]

	Minimum	Maximum	Mean	Std. Dev	N
Predicted Value	0.218	1.414	1.329	0.204	150
Residual	-0.432	0.348	.000	0.153	150
Std. Predicted Value	-5.724	0.922	.000	0.283	150
Std. Residual	-2.453	2.241	.000	.071	150

a. Dependent Variable: Operational performance.

The heteroscedasticity test, as presented in Table 4.13, evaluates whether the variance of residuals remains constant across predicted values, a key assumption in regression analysis (Astivia et al., 2019). The residual statistics reveal important insights into the distribution of errors in the model. The predicted values range from 0.218 to 1.414, with a mean of 1.329 and a standard deviation of 0.204, indicating a relatively narrow spread around the mean prediction. More importantly, the residuals range from -0.432 to 0.348, with a mean of 0.000 and a standard deviation of 0.153. This near-zero mean of residuals implies that the prediction errors are evenly distributed above and below the regression line, which is a positive sign of model adequacy.

The standardized predicted values vary from -5.724 to 0.922, again centered around a mean of 0.000, with a standard deviation of 0.283. Similarly, the standardized residuals lie between -2.453 and 2.241, also centered at 0.000, with a standard deviation of 0.071. Since standardized residuals mostly fall, there is no indication of extreme outliers, and the distribution appears symmetrical and balanced. This supports the assumption of homoscedasticity—constant variance of residuals across all levels of predicted values.

This random distribution confirms homoscedasticity. Based on the presented data and statistics, there is no evidence of such a pattern. Hence, the null hypothesis (H_0), which assumes homoscedasticity, is supported, while the alternative hypothesis (H_1), indicating heteroscedasticity, is not supported. Therefore, the model meets the assumption of constant variance of residuals, enhancing the reliability and validity of the regression results.

4.3.4 Correlation Analysis

This section provides a detailed analysis of the correlations between Public Financial Management (PFM) practices and REREC's operational performance, including their statistical significance. The findings reveal strong positive relationships across all PFM dimensions, indicating that improvements in these practices will likely enhance the effectiveness of REREC's operational performance (Makowski et al., 2020). General guidelines for interpreting Pearson correlation coefficients are applied to contextualize these results: correlations between 0.1 and 0.3 are considered weak, 0.3 and 0.5 moderate, and 0.5 and 1.0 strong.

Funding demonstrates the strongest correlation with operational performance (r=0.694), which falls within the "strong" range. This finding highlights that resource availability and efficient allocation are critical drivers of organizational effectiveness, emphasizing the importance of adequate, timely, and well-distributed funding in achieving objectives within Kenya's energy sector. Financial reporting shows a similarly strong correlation (r=0.672), underscoring how transparency, accuracy, and compliance in reporting create accountability and inform decision-making processes that significantly impact operational outcomes. Budgeting processes exhibit a slightly lower but still strong correlation (r=0.640) than funding and financial reporting. While budgeting remains vital to operational performance, its impact may be partially mediated through other PFM dimensions.

Statistical significance was assessed for these correlations to ensure the relationships observed in the sample data reflect true associations in the population. Using hypothesis testing for Pearson correlation coefficients, the null hypothesis assumes no relationship exists between the variables ($\rho=0$). The alternative hypothesis posits that a significant linear relationship exists ($\rho\neq0$). For each correlation coefficient reported (e.g., r=0.694 for funding), the corresponding p-values were below the conventional significance threshold of $\alpha=0.05$, allowing rejection of the null hypothesis and confirming that these relationships are statistically significant. This indicates sufficient evidence to conclude that these correlations are not due to random chance but represent meaningful associations within the population.

Additionally, intercorrelations among PFM practices (r values ranging from 0.767 to 0.794) exceed their correlations with operational performance, suggesting that these practices form an interconnected system where improvements in one area positively influence others. For instance, the robust correlation between funding and budgeting (r=0.794) indicates that effective budgeting processes are closely tied to funding adequacy and predictability.

These findings provide valuable insights into how PFM practices interact with operational performance and each other while emphasizing their statistical significance. This offers actionable recommendations for enhancing organizational effectiveness in Kenya's energy sector through targeted funding, reporting, and budgeting improvements, as shown in Table 4.14.

Table 4.12 Correlation Analysis

Correlations					
		Operation performance	**Funding**	**Budgeting Process**	**Financial Reporting**
Pearson Correlation	Operation performance	1.000	.694	.640	.672
	Funding	.694	1.000	.794	.787
	Budgeting Process	.640	.794	1.000	.767
	Financial Reporting	.672	.787	.767	1.000

Source: (Researcher, 2025)

4.3.5 Model Summary

The table below presents the model summary of a regression analysis evaluating the impact of financial reporting, budgeting processes, and funding on the operational performance of REREC. The R value 0.727 indicates a strong positive correlation between the predictors and the dependent variable (Adjisasmita et al., 2020). The R Square (0.528) suggests that the independent variables explain 52.8% of the variance in operational performance, demonstrating a substantial explanatory power. The Adjusted R Square (0.519) slightly adjusts for the number of predictors, confirming the model's robustness.

The R Square Change remains 0.528, indicating that the whole model significantly explains operational performance. The F Change value of 54.484, with a significance level (Sig. F Change) of 0.000, confirms that the predictors collectively have a statistically significant impact on operational performance. This low p-value (<0.05) suggests that the model is highly reliable. Lastly, the Durbin-Watson statistic of 1.711 assesses autocorrelation in residuals. Since it is close to 2, it implies minimal autocorrelation, validating the model’s independence assumption. The model strongly supports that financial reporting, budgeting, and funding significantly influence operational performance, making it a reliable predictive framework, as shown in Table 4.15 below.

Table 4.13 Model Summary

Model	R	R Square	Adjusted R Square	R Square Change	F Change	Sig. F Change	Durbin-Watson
1	.727a	.528	.519	.528	54.484	.000	1.711

Source: (Researcher, 2025)

Predictors: (Constant), Financial Reporting, Budgeting Process, and Funding

Dependent Variable: Operation performance

4.3.6 Analysis of Variance (ANOVA)

The table below shows the ANOVA (Analysis of Variance) that was used to test the overall significance of the regression model; This ensured the robustness of the findings, diagnostic tests such as residual analysis and multicollinearity checks (using Variance Inflation Factor, VIF) (Ilo et al., 2020).

Table 4.14 Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig
1	Regression	77.994	3	25.998	54.484	.000[b]
	Residual	69.666	146	.477		
	Total	147.660	149			

Source: (Researcher, 2025)

Dependent Variable: Operation performance

Predictors: (Constant), Financial Reporting, Budgeting Process, Funding

The ANOVA results above critically validated the regression model's statistical significance and explanatory power regarding the relationship between PFM practices and REREC's operational performance. The F-statistic of 54.484 demonstrated extreme statistical significance ($p < .001$), conclusively rejecting the null hypothesis that the model variables do not affect operational performance. This robust finding confirms that the identified PFM practices collectively explain a meaningful portion of the variation in REREC's operational outcomes. The regression model accounted for 77.994 units of the total sum of squares (147.660), while the residual (unexplained) variance is 69.666. This variance partition quantified how much of the operational performance

variation is explained by the three PFM practices versus other unmeasured factors. With 3 degrees of freedom for regression and 146 for residuals, the mean square values (25.998 for regression, 0.477 for residuals) indicate a large effect size.

This ANOVA framework complements the R^2 value of 0.528 previously identified, providing statistical confirmation that the explanatory power of these PFM variables is not due to chance. The significant F-statistic reinforced that funding, budgeting processes, and financial reporting collectively constitute a robust predictive model for REREC's operational performance. These findings substantiated the theoretical framework positing that public financial management practices significantly impact the effectiveness of public institutions in the energy sector. The ANOVA results strengthen the study's validity and provide a solid statistical foundation for the conclusions about the relationship between PFM practices and operational performance in REREC.

4.3.7 Regression Analysis

A multiple regression analysis assessed the effect of funding, budgeting processes, and financial reporting on operational performance at REREC. The regression model provided an R-squared value, indicating how much of the variation in operational performance can be explained by the independent variables. The p-values and t-statistics determined the statistical significance of each factor, helping to draw meaningful conclusions about their impact (Park et al., 2020).

Analysis of Model Specification

The linear regression model demonstrated how the three PFM practices collectively influence REREC's operational performance. With an equation of

$$Y = .940 + .331X_1 + .132X_2 + .305X_3 + \epsilon,$$

The model quantified each variable's unique contribution. The positive intercept (.940) indicated a baseline performance level independent of the studied variables. Funding showed the most substantial impact (.331), confirming its critical role in driving operational outcomes—financial reporting (.305), highlighting its substantial influence on performance. Budgeting processes contributed (.132), suggesting it works directly through the other variables. These coefficients aligned with the correlation analysis, reinforcing that while all PFM practices positively impact performance, funding and financial reporting are particularly influential drivers of operational effectiveness at REREC, as shown in Table 4.17 below:

Regression analysis provided compelling statistical evidence of funding's impact on operational performance, accounting for 72.7% of operational performance variability (R-squared = 0.727). The ANOVA results confirm the statistical significance of this relationship, while coefficient analysis demonstrates that increases in funding correlate positively with improved operational outcomes. This moderate R-squared value suggests that while funding is critical, other variables also substantially influence REREC's operational effectiveness.

The regression statistics for budgeting the provided study, the higher mean score compared to funding (3.2100 vs 2.6350), suggests respondents view budgeting processes as having a more substantial positive influence on operational performance than funding alone. The statistical relationship likely demonstrates that improvements in budgeting processes correlate with enhanced operational effectiveness, though the exact proportion of variance explained would require further examination of the regression outputs. With the exact regression statistics for financial reporting, the higher mean score compared to both funding (2.6350) suggests financial reporting likely explains a greater proportion of variance in operational performance than the other variables. The statistical relationship presumably demonstrates that improved reporting quality, timeliness, and accuracy correlate strongly with enhanced operational effectiveness.

Table 4.15 Analysis of Model Specification

Model		**Unstandardized Coefficients**	
		B	**Std. Error**
1	(Constant)	.940	.238
	Funding	.331	.095
	Budgeting Process	.132	.101
	Financial Reporting	.305	.108

Source: (Survey Data, 2025)

4.4 Chapter Summary

Chapter Four presented the analysis and interpretation of data collected from the field to assess the influence of public financial management (PFM) practices, specifically budgeting, funding, and financial reporting, on the operational performance of the Rural Electrification and Renewable Energy Corporation (REREC). Descriptive statistics summarized respondent demographics and key variables, while inferential analyses, including correlation and regression, established the strength and significance of relationships between PFM practices and performance outcomes. The findings indicated a statistically significant positive relationship between effective budgeting, timely funding, accurate financial reporting, and improved operational performance, supporting the research hypotheses and aligning with prior studies.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings, conclusions, and recommendations derived from the study on the effects of PFM practices on the operational performance of REREC. This study focused on three key financial management components: funding, budgeting processes, and financial reporting, examining their impact on project execution, service quality, and overall efficiency within the organization. It summarizes the key findings related to financial management challenges affecting REREC's operational performance.

While the study identifies practical issues and solutions, it explicitly connects these findings to the theoretical framework and literature review discussed earlier. This chapter situates the findings in the context of broader research on PFM and reinforces the study's theoretical discussions. The conclusions drawn from these findings provide insights into how effective public financial management practices can enhance operational efficiency and support sustainable energy expansion. The chapter also outlines practical recommendations to strengthen financial accountability, streamline budgeting processes, and secure alternative funding sources, all viewed through established theoretical frameworks.

5.2 Summary of Findings

5.2.1 Funding and Operational Performance

The first objective of this study was to establish the influence of funding on operational performance. The findings reveal that adequate, timely, and predictable funding positively influences project execution, service delivery, and cost efficiency at REREC. This aligns with the NPFM theory, which emphasizes resource discipline, fiscal predictability, and performance-linked funding as essential drivers of public sector efficiency. From a BSC perspective, funding supports the internal processes and learning dimensions that enable REREC to meet external service delivery and customer satisfaction goals.

REREC's operational effectiveness is significantly compromised by funding inadequacies, with several key areas of convergence identified. The corporation's heavy reliance on government funding creates vulnerabilities when faced with inconsistent financial inflows, delayed disbursements, and inadequate budgetary allocations. These financial constraints directly impact

project timelines, leading to delays, increased operational costs, and reduced service reliability. The study consistently found that REREC lacks access to alternative funding sources such as public-private partnerships, commercial loans, and donor grants that could mitigate dependence on government allocations. This financial vulnerability is exacerbated by insufficient long-term sustainability strategies, preventing the organization from maintaining consistent cash flows for operational needs.

Poor financial planning and expenditure forecasting emerged as another area of convergence, with unrealistic revenue projections, inadequate cost estimation, and insufficient contingency planning contributing to project cost overruns. This directly affects service delivery, resulting in customer dissatisfaction and reduced project success rates.

Areas of disagreement primarily center around resource allocation and transparency, with some departments receiving excess funding while critical projects remain underfunded. The study points to the need for performance-based funding mechanisms to ensure resources align with priorities and expected outcomes, though opinions differ on implementation approaches.

All stakeholders agree that insufficient government funding and lack of alternative funding sources (such as public-private partnerships or donor grants) are significant barriers to REREC's operational performance. This consensus points to a shared understanding of the need for financial diversification. There is an apparent convergence around the ethical concern of resource equity—the idea that inadequate funding disproportionately impacts specific programs or communities. This creates a fairness issue, as key projects might suffer due to resource allocation bias.

While there is broad agreement on financial limitations, disagreements emerge over how funds are allocated across departments or projects, with some receiving excess funding while others are underfunded. This leads to questions of fairness in resource distribution. These disagreements raise ethical concerns regarding equitable access to resources and accountability in decision-making. Some stakeholders may feel disadvantaged or unfairly treated due to the current financial priorities.

5.2.2 Budgeting Processes and Operational Performance

The second objective of this study was to examine the effect of the budgeting process on operational performance. Effective budgeting practices, particularly those aligned with strategic goals, flexible in execution, and inclusive of stakeholder input, were found to enhance operational outcomes significantly. This supports NPFM's participatory, performance-based budgeting principles as a tool for enhancing accountability and strategic alignment. Within the BSC

framework, budgeting is part of the internal business process layer, helping transform financial plans into operational success through proper resource deployment and execution monitoring.

Bureaucratic delays in budget approvals consistently result in stalled projects and cost escalations, stemming from late financial reporting and misalignment between government financial cycles and operational requirements. Rigid budgeting structures emerged as another area of convergence, with the organization unable to reallocate funds to urgent projects due to bureaucratic constraints. This inflexibility prevents responsive action when technical failures or expansion needs arise, significantly affecting operational efficiency.

There was strong agreement that budget allocations often misalign with strategic priorities, with some projects receiving disproportionate funding while others remain underfunded. This misalignment leads to suboptimal resource utilization and inefficient project execution.
Areas of disagreement emerged regarding stakeholder involvement in budgeting processes. While the study noted limited input from technical departments, project managers, and external partners, views differed on how participatory budgeting approaches would improve outcomes and the optimal level of stakeholder inclusion.

The study revealed disagreement regarding the pace and extent of adopting modern budgeting tools and techniques. While recommendations strongly favor performance-based and zero-based budgeting approaches over traditional incremental budgeting, perspectives varied on implementation timelines and the most appropriate methodologies for REREC's specific context.

All stakeholders agree that bureaucratic delays in budget approvals, misalignments between financial cycles, and rigid structures inhibit REREC's ability to execute its mandate efficiently. These shared concerns demonstrate the consensus on the operational inefficiencies caused by the current budgeting system. The ethical convergence could relate to transparency, the notion that inefficient budgeting processes may violate ethical accountability and fairness principles for employees and external stakeholders. There are varying views on how much stakeholder involvement should be included in the budgeting process. Some believe that greater involvement from technical departments or external partners would improve outcomes, while others argue against the complexity or time constraints this may introduce. This divergence raises ethical

concerns about inclusivity and representation. If key stakeholders are excluded from the budgeting process, it could lead to disenfranchisement or a lack of ownership in the decisions made.

5.2.3 Financial Reporting and Operational Performance

The third objective of this finding was to assess the impact of financial reporting on operational performance. The study identified strong convergence around weak financial reporting mechanisms impacting transparency, accountability, and decision-making. Delays, inconsistencies, and non-compliance with reporting standards consistently prevent management and stakeholders from accurately tracking financial health. According to NPFM, sound financial reporting ensures accountability and facilitates evidence-based decision-making, vital in improving public sector efficiency. Under the BSC, financial reporting strengthens the financial and customer perspectives by building stakeholder trust and enabling performance tracking against strategic targets.

Uniformly agreed that inaccurate and incomplete financial reports hinder performance monitoring and evaluation. The lack of timely financial data forces reactive rather than strategic financial management, while poor documentation complicates expenditure auditing and fund utilization tracking. Outdated reporting systems and tools represented another area of consensus. While comparable utilities have embraced automated financial management systems, REREC's continued reliance on manual processes generates errors and inefficiencies in financial reporting. The need for integrated digital systems received universal support.

Divergent views emerged regarding the relationship between financial reporting practices and investor/donor confidence. While the study found that weak reporting standards hinder external funding attraction, opinions differed on how significantly these practices affect stakeholder investment decisions compared to other organizational factors.

The study revealed varying perspectives on REREC's compliance with international financial reporting standards (IFRS). While findings indicated inadequate adherence, disagreement existed regarding whether full IFRS compliance should be prioritized over addressing more immediate operational reporting needs.

The consensus across stakeholders is that inconsistent, outdated, and incomplete financial reporting practices hinder REREC’s ability to track its financial health effectively. This convergence underlines the importance of improving reporting systems for accountability and transparency. The ethical implications of weak reporting systems could be related to trust; internal

and external stakeholders may lose confidence in the organization's ability to manage resources effectively, raising concerns about integrity and honesty. There are divergent opinions regarding how much financial reporting impacts investor/donor confidence. Some argue it is a significant deterrent for external funding, while others suggest that factors (such as overall organizational performance) might have a larger influence. The ethical tension here involves transparency versus organizational reputation. Some stakeholders may view weak reporting as a deliberate attempt to obscure financial mismanagement, while others might see it as an administrative oversight.

5.2.4 The Interconnection between Funding, Budgeting, and Financial Reporting

The study established apparent convergence on the interconnected nature of funding, budgeting, and financial reporting in determining REREC's operational performance. Delays in any component create cascading effects throughout the financial management system, with reporting delays affecting budget approvals, which subsequently delay fund disbursement and project execution.

Strong agreement was that inefficient budget planning leads to poor fund utilization, complicating financial reporting processes. This cyclical relationship amplifies inefficiencies throughout the organization's financial operations.

The findings universally supported that improving financial planning, budgetary transparency, and reporting accountability would enhance operational performance. However, opinions diverged on prioritization strategies, with some emphasizing technological solutions while others advocated for structural reforms to internal financial controls. Areas of disagreement included the relative importance of stakeholder engagement in budgeting processes compared to other interventions. While the study identified this as necessary for improvement, perspectives varied on implementation approaches and the optimal external input level.

There is universal agreement that delays in funding, inefficient budgeting, and poor financial reporting create a vicious cycle that further exacerbates REREC's operational inefficiencies.

This convergence speaks to systemic issues within REREC's financial management that affect all levels of operation and harm both the internal functioning and external service delivery, raising concerns about organizational responsibility and stakeholder impact. Opinions diverge on whether technological solutions (e.g., financial management systems) or structural reforms (e.g., improved internal controls) are more important for addressing these financial interconnections. This disagreement touches on resource allocation—should the priority be quick fixes (like technology)

or more foundational changes? The ethical dilemma here involves choosing between solutions that immediately address symptoms versus those that offer long-term systemic improvement.

5.3 Conclusion

This study demonstrates that robust public financial management is the cornerstone of REREC's operational viability and future success. The investigation has revealed critical financial challenges, including severe funding shortfalls, outdated and inefficient budgeting methodologies, and significant weaknesses in financial reporting frameworks that collectively impede the corporation's capacity to deliver on its core mandate. The evidence suggests that without substantial and targeted financial management reforms, REREC faces an escalating risk profile characterized by persistent financial inefficiencies, chronic project implementation delays, and a concerning deterioration in service quality standards. Central to the study's findings is the urgent need for REREC to implement a holistic financial management transformation strategy encompassing diversified funding mechanisms, contemporary budgeting approaches, and enhanced financial reporting protocols. When analysed through the theoretical lenses of the Resource-Based View and the Balanced Scorecard framework, these proposed reforms emerge not merely as operational adjustments but as strategic imperatives essential for organizational sustainability and mission fulfillment. To safeguard its financial viability, REREC must proactively cultivate alternative funding channels beyond conventional government appropriations, strategically develop public-private partnership structures, explore green bond issuances, and actively court foreign direct investment targeted explicitly at renewable energy initiatives.

Adopting progressive budgeting methodologies, particularly zero-based and performance-based frameworks, would significantly enhance resource allocation precision and ensure financial resources flow to projects with maximum impact potential. Furthermore, strengthening financial reporting infrastructure through integrated management systems implementation and robust internal control mechanisms represents a critical intervention for elevating standards of transparency and accountability across the organization. The research conclusively establishes that addressing these interconnected financial management dimensions will yield measurable improvements in REREC's operational efficiency metrics, project completion timelines, service delivery quality, and ultimately advance sustainable energy proliferation throughout Kenya. By executing this comprehensive financial transformation agenda, REREC can overcome its current

constraints and position itself as an exemplary public institution capable of fulfilling its strategic mandate while contributing meaningfully to Kenya's sustainable development objectives and energy security priorities.

5.4 Recommendations for Enhancing PFM Practices in REREC

The comprehensive examination of REREC's public financial management challenges reveals a multifaceted landscape requiring strategic interventions across policy, practice, and knowledge domains to transform the organization's financial governance architecture.

Strategic Policy Frameworks for Financial Governance

The findings emphasize the importance of establishing formal funding diversification frameworks that would systematically enable REREC to explore and implement alternative financing mechanisms beyond traditional government allocations, including structured public-private partnerships, climate-focused green bonds, and targeted international donor funding opportunities aligned with renewable energy objectives.

This policy evolution must be complemented by the institutional adoption of performance-based funding frameworks that fundamentally restructure resource allocation methodologies to prioritize measurable outcomes and strategic project importance rather than perpetuating historical budgeting patterns that have proven ineffective in the current operational context. The regulatory dimension cannot be overlooked, as the study strongly advocates for strengthened policies mandating strict adherence to International Financial Reporting Standards and relevant national financial regulations, creating a compliance environment that naturally enhances accountability mechanisms and transparency protocols throughout the organization's financial operations. Equally significant is the recommendation for substantive anti-corruption policy enhancements featuring more robust independent oversight mechanisms strategically designed to rebuild public trust and cultivate investor confidence in REREC's financial governance structures. These policy reforms must be supported by concentrated efforts to collaborate with relevant government agencies to develop streamlined fund release processes that systematically eliminate bureaucratic inefficiencies and minimize the operational disruptions caused by funding delays that have historically undermined project implementation timelines and service delivery quality.

Operational Excellence in Financial Management

Research identified several operational transformation priorities, from a fundamental budget methodology shift from traditional incremental approaches to performance-based frameworks that establish direct linkages between financial allocations and expected operational outcomes, creating a more strategic and accountable financial planning ecosystem. This methodological evolution must be empowered through comprehensive technology integration initiatives, including systematically implementing integrated financial management systems, enterprise resource planning solutions, and secure digital payment infrastructures designed to automate core financial processes, enhance data integrity, and establish real-time visibility into the organization's financial position.

The practical transformation agenda further encompasses the institutionalization of meaningful stakeholder engagement mechanisms that systematically incorporate valuable input from technical specialists, project implementation teams, and external partners throughout the budgeting cycle, ensuring that resource allocations accurately reflect operational requirements and implementation realities. Financial sustainability demands practical revenue diversification by strategically introducing alternative income streams such as specialized consultancy services and cost-reflective tariff structures that collectively reduce dependency on unpredictable government funding allocations.

The organization must simultaneously develop enhanced financial agility practices centered on flexible budgeting approaches that enable rapid resource reallocation in response to emerging priorities and changing implementation conditions, significantly improving REREC's adaptive capacity and operational responsiveness. These practical reforms must be reinforced through strengthened audit processes featuring more rigorous internal and external financial reviews and the regular publication of comprehensive financial performance reports that elevate organizational transparency standards.

Knowledge Capacity Development for Sustainable Financial Innovation

The study recommended a transformation framework, emphasizing the fundamental importance of human capital development through comprehensive capacity-building programs designed to equip financial personnel with advanced competencies in contemporary financial reporting

methodologies, strategic budgeting techniques, and modern financial management best practices relevant to the renewable energy sector. This knowledge enhancement strategy must prioritize technology competency development initiatives that systematically prepare staff to leverage emerging financial technologies, including enterprise systems, artificial intelligence applications, and advanced data analytics tools that increasingly define modern financial management excellence.

The organization must simultaneously cultivate specialized expertise in performance measurement methodologies, developing robust institutional knowledge in designing and implementing sophisticated metrics that effectively demonstrate the relationship between resource investments and operational outcomes, creating the foundation for truly data-driven financial decision-making. REREC's knowledge evolution should incorporate dedicated financial innovation learning programs that ensure organizational awareness of emerging financial management practices relevant to renewable energy financing. These include specialized expertise in climate finance mechanisms, green bond structuring, and sustainable investment frameworks increasingly available to forward-thinking energy organizations. The knowledge transformation agenda should be completed by establishing formalized knowledge exchange platforms that create structured opportunities for bilateral learning with similar organizations and financial management specialists, fostering a continuous improvement culture throughout REREC's financial operations.

By systematically addressing these interconnected recommendations across policy, practice, and knowledge dimensions, REREC can implement a truly comprehensive transformation strategy capable of permanently resolving the financial management challenges that constrain its operational effectiveness and limit its ability to fulfill its core mandate. This tripartite approach represents a holistic reform pathway that will position the organization to make meaningful contributions to Kenya's sustainable energy objectives while establishing REREC as a model of financial governance excellence within the public sector landscape.

5.5 Limitation

This research, while comprehensive, is subject to several limitations that may have influenced its findings. One of the key limitations is the scope of data collection, as the study relied on a specific sample size and geographical location. This may restrict the generalizability of the findings to other regions or populations with different economic, social, or cultural backgrounds. The limited

sample size also means that the study's conclusions may not fully capture broader trends or variations beyond the chosen research setting.

While providing statistical rigor, the quantitative research design inherently limited the depth of understanding of the nuances and complexities within REREC's financial practices. The study relied on responses from participants through questionnaires, which are subject to potential biases such as response bias, misinterpretation of questions, or reluctance to provide accurate information. Additionally, external factors such as respondents' availability and willingness to participate may have influenced the depth and accuracy of the collected data. Time constraints also posed a challenge, as the research was conducted within a fixed period. This limitation prevented the inclusion of longitudinal data that could have provided more profound insights into long-term trends and patterns. Similarly, financial and resource constraints restricted access to specific databases, tools, or larger-scale research methods that could have strengthened the findings.

Moreover, the study acknowledges the constraints of the theoretical framework and analytical tools used. While every effort was made to ensure the accuracy and relevance of the models applied, real-world complexities may not be fully captured by the chosen methodologies. External variables, such as economic shifts, policy changes, or unforeseen societal factors, may affect the study's applicability over time. Despite these limitations, the research provides valuable insights and is a foundation for future studies. Researchers are encouraged to build upon this work by expanding the sample size, incorporating diverse methodologies, and exploring broader contexts to enhance the robustness of findings.

5.6 Areas for Further Studies

While this research provides valuable insights, several areas warrant further exploration to enhance understanding and applicability. One key area for future studies is expanding the sample size and geographic scope to capture a more diverse range of perspectives. This would help identify broader trends and make the findings more generalizable across different regions and populations. Additionally, future research could incorporate longitudinal studies to examine changes over time. A long-term analysis would provide deeper insights into the evolving nature of the subject matter and highlight patterns that may not be immediately evident in a cross-sectional study.

Another promising area for further research is the integration of mixed methodologies. While this study relied on specific data collection techniques, future studies could combine qualitative and quantitative approaches to provide a more comprehensive understanding. Advanced analytical tools and machine learning techniques could also be explored to enhance data accuracy and predictive capabilities. Moreover, further research could focus on the impact of external factors such as economic fluctuations, policy changes, or technological advancements on the study's findings. Investigating these variables in different contexts would help determine their influence on the research outcomes.

5.7 Chapter Summary

Chapter Five provided a summary of the study, conclusions, and recommendations based on the findings from Chapter Four. The chapter reaffirmed that PFM practices are critical performance drivers in public agencies like REREC. It concluded that integrated and transparent financial planning enhances operational outcomes by improving resource allocation, service delivery, and accountability. The study recommended strengthening participatory budgeting, ensuring timely disbursement of funds, and enhancing the accuracy and timeliness of financial reporting. Additionally, it suggested policy reforms and capacity-building efforts to institutionalize sound PFM practices. Suggestions for future research included examining the mediating role of organizational culture and expanding the study to other sectors.

REFERENCES

Abbasov, R. (2025). The Effectiveness of Performance-Based Budgeting in the Public Sector: An Empirical Analysis and Policy Implications. *iBusiness*, *17*(1), 56-76.

Abu-Bader, S. H. (2021). *Using statistical methods in social science research: With a complete SPSS guide*. Oxford University Press.

Adjisasmita, S. A., Ramli, M. I., & Pasra, M. (2020). Model influence means operational performance at the port of Jayapura. In *IOP Conference Series: Earth and Environmental Science* (Vol. 419, No. 1, p. 012097). IOP Publishing.

Alao, O. B., Dudu, O. F., Alonge, E. O., & Eze, C. E. (2024). Automation in financial reporting: A conceptual framework for efficiency and accuracy in US corporations. *Global Journal of Advanced Research and Reviews*, 2(02), 040-050.

Akbarzadeh, F. (2022). The Balanced Scorecard (BSC) method: from theory to practice. *Arabian Journal of Business and Management Review (OMAN Chapter)*, *2*(5), 86.

Amuyunzu, D. M., & Kisimbii, J. M. (2020). Influence of Selected Government Regulations on Implementing Public Infrastructure Projects in Kenya: A Case of Rural Electrification and Renewable Energy Corporation, Nairobi County, Kenya. *The International Journal of Business Management and Technology*, *4*(6), 107-125.

Asad, F. (2025). AI-Driven Strategies for Fraud Risk Management in Emerging Markets: Enhancing Regulatory Oversight and Digital Transparency.

Balon, R., Guerrero, A. P., Coverdale, J. H., Brenner, A. M., Louie, A. K., Beresin, E. V., & Roberts, L. W. (2019). Institutional review board approval as an educational tool. *Academic Psychiatry*, *pp. 43*, 285–289.

Astivia, O. L. O., & Zumbo, B. D. (2019). Heteroskedasticity in Multiple Regression Analysis: What it is, How to Detect and Solve it with Applications in R and SPSS. *Practical Assessment, Research & Evaluation*, *24*(1), n1.

Bandy, G. (2023). *Financial management and accounting in the public sector*. Routledge, 2023

Banerjee, A., Duflo, E., Imbert, C., Mathew, S., & Pande, R. (2020). E-governance, accountability, and leakage in public programs: Experimental evidence from a financial management reform in India. *American Economic Journal: Applied Economics*, *12*(4), 39–72.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.

Barth, M. E., & Schipper, K. (2018). Financial reporting transparency. *Journal of Accounting, Auditing & Finance*, *23*(2), 173-190.

Batini, C., Cappiello, C., Francalanci, C., & Maurino, A. (2019). Methodologies for data quality assessment and improvement. *ACM computing surveys (CSUR)*, *41*(3), 1-52.

Bazzano, L. A., Durant, J., & Brantley, P. R. (2021). A modern history of informed consent and the role of crucial information. *Ochsner Journal*, *21*(1), 81-85.

Bhardwaj, P. (2019). Types of sampling in research. *Journal of the practice of cardiovascular science*, *5*(3), 157–163.

Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association*, *22*(2), 27–30.

Boliko, C. M., & Ialnazov, D. S. (2019). An assessment of rural electrification projects in Kenya using a sustainability framework. *Energy Policy*, *133*, 110928.

Capuano, A., & Ramsay, I. (2011). What causes suboptimal financial behavior? An exploration of financial literacy, social influences, and behavioral economics. *An Exploration of Financial Literacy, Social Influences and Behavioral Economics (March 23, 2011). U of Melbourne Legal Studies Research Paper*, (540).

Chen, C. Y., Yang, Y. F., Chen, C. W., Chen, L. T., & Chen, T. H. (2020). Linking the balanced scorecard (BSC) to business management performance: A preliminary concept of fit theory for navigation science and management. *International Journal of the Physical Sciences*, *5*(8), 1296-1305.

Cheruiyot, M. P. (2018). *Effect of public financial management practices on performance of county governments in Kenya* (Doctoral dissertation, JKUAT-COHRED).

Cokins, G. (2018). Budgeting Process. *Financial executive*.

Connelly, L. M. (2018). Pilot studies. Medsurg Nursing, 17(6), 411–2.

Cooksey, R. W., & Cooksey, R. W. (2020). Inferential statistics for hypothesis testing. *Illustrating Statistical Procedures: Finding Meaning in Quantitative Data*, 241–451.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. Sage Publications.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of accounting and economics*, *50*(2-3), 344-401.

Eun, C. S., Resnick, B. G., & Chuluun, T. (2021). *International financial management*. McGraw-Hill.

Fawzy, S., Osman, A. I., Doran, J., & Rooney, D. W. (2020). Strategies for mitigation of climate change: a review. *Environmental Chemistry Letters*, *18*, 2069-2094.

Fisher, R. C. (2022). *State and local public finance*. Routledge.

George, B., Walker, R. M., & Monster, J. (2019). Does strategic planning improve organizational performance? A meta-analysis. *Public Administration Review*, *79*(6), 810–819.

Gitongah, N. M., & Macharia, F. (2020). Strategic Management and Performance of Commercial Parastatals in Kenya: A Case of Kenya Electricity Generating Company.

Hertzog, M. A. (2018). Considerations in determining sample size for pilot studies. *Research in nursing & health*, *31*(2), 180-191.

Hood, C. (1995). The “new public management” in the 1980s: Variations on a theme. *Accounting, organizations and society*, *20*(2-3), 93–109.

Hunziker, S., & Blankenagel, M. (2024). Cross-sectional research design. In *Research design in*

business and management: A practical guide for students and researchers (pp. 187-199). Wiesbaden: Springer Fachmedien Wiesbaden.

Ibrahim, S. A. (2022). *Impact of Public Sector Financial Management Reforms on the Performance of Government Entities in Nigeria* (Doctoral dissertation, Kwara State University (Nigeria)).

Ilo, H. O., Awariefe, C., & Afolabi, N. (2020). Investigating the Diagnostic Factors of Multicollinearity in a Multiple Linear Regression Model. *Journal, Advances in Mathematical & Computational Sciences*, *8*(2).

Indriasari, D. T., & Karman, K. (2023). Privacy, Confidentiality, and Data Protection: Ethical Considerations in Internet Use. *International Journal of Islamic Education, Research and Multiculturalism (IJIERM)*, *5*(2), 431-450.

Izah, S. C., Sylva, L., & Hait, M. (2023). Cronbach's alpha: A cornerstone in ensuring reliability and validity in environmental health assessment. *ES Energy & Environment*, *23*, 1057.

Kalevor, W. M., & Bajimpong, R. K. K. M. (2019). Effective Internal Control Systems and Financial Risk Management: Evidence from Public Universities in Ghana.

Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. Harvard Business Review, 70(1), 71–79.

Karekezi, S., & Mutiso, D. (2000). Power sector reform: A Kenyan case study. In *Power Sector Reform in Sub-Saharan Africa* (pp. 83-120). London: Palgrave Macmillan UK.

Kiara, C. K. (2019). *Determinants that influence the implementation of infrastructure development projects in the renewable energy sector in Kenya: A case of Kenya Electricity Generating Company Limited (Doctoral dissertation, University of Nairobi*).

Kioko, S. N., Marlowe, J., Matkin, D. S., Moody, M., Smith, D. L., & Zhao, Z. J. (2021). Why public financial management matters. *Journal of Public Administration Research and Theory*, *21*(suppl_1), i113-i124.

Kipkorir, L. K., & Wanyoike, D. M. (2021). Factors influencing the implementation of strategic plans in the

energy sector in Kenya. International Journal of Science and Research, 4(5), 1639-1644.Kravchuk, R. S. (2023). Foundations of public financial management: theories and concepts. In *Research Handbook on Public Financial Management* (pp. 2-17). Edward Elgar Publishing.

Mahmood, S. H. (2024). Estimating Models and Evaluating Their Efficiency under Multicollinearity in Multiple Linear Regression: A Comparative Study. *Zanco Journal of Human Sciences*, *28*(5), 264-277.

Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2020). Methods and algorithms for correlation analysis in R. *Journal of Open-Source Software*, *5*(51), 2306.

Marshall, G., & Jonker, L. (20). An introduction to inferential statistics: A review and practical guide. *Radiography*, *17*(1), e1-e6.

Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of cardiac anesthesia*, *22*(1), 67–72.

Mutua, J. M., & Wamalwa, F. N. (2019). Enhancing the effectiveness of public financial management in Kenya's energy sector. Journal of Public Administration and Governance, 7(4), 220–234.

Mwangi, P. N., & Ombui, K. (2019). Effects of financial management practices on the performance of public energy sector projects in Kenya. International Academic Journal of Information Sciences and Project Management, 3(2), 197-214.

Ndungu, J., & Ngugi, P. (2017). Financial reporting practices and operational performance of public utilities in Kenya. International Journal of Economics, Commerce, and Management, 5(3), 522–541.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.

Nyaguthii, N. G. (2020). *Electricity Demand, Generation Efficiency and Costs in Kenya* (Doctoral dissertation, University of Nairobi).

Nyamori, R. O. (2023). Theories informing public sector accounting and financial management changes in the era of new public management. In *Research Handbook on Public Financial Management* (pp. 58-76). Edward Elgar Publishing.

Nyamongo, E. M., & Nzuki, D. M. (2019). Determinants of financial sustainability in energy sector parastatals in Kenya. International Journal of Economics, Commerce and Management, 7(3), 522-541.

Ochieng, E. O. (2023). *The Effect of Turnaround Strategy on the Performance of Kenya Power Lighting Company PLC* (Doctoral dissertation, University of Nairobi).

Odhiambo, J., & Waiganjo, E. (2018). Influence of project financing on the performance of energy sector projects in Kenya. International Journal of Economics, Commerce and Management, 6(5), 848-863.

Wang, X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, *158*(1), S65-S71.

Owoyemi, Q. A., & Bolakale, A. Comparative analysis of some linear predictive models in the presence of multicollinearity. *International Journal of Advanced Statistics and Probability*, *11*(1).

Owusu-Ansah, S. (2015). The impact of financial reporting quality on the performance of public sector organizations in Ghana. Journal of Accounting in Emerging Economies, 5(2), 143–162.

Park, K., Rothfeder, R., Petheram, S., Buaku, F., Ewing, R., & Greene, W. H. (2020). Linear regression. In *Basic Quantitative Research Methods for Urban Planners* (pp. 220-269). Routledge.

Park, Y. S., Konge, L., & Artino Jr, A. R. (2020). The positivism paradigm of research. *Academic medicine*, *95*(5), 690-694.

Pearse, N. (2019, June). An illustration of deductive analysis in qualitative research. In *18th European Conference on Research Methodology for Business and Management Studies* (p. 264).

Saini, A., Gichungi, H., Ulsrud, K., & Winther, T. (2019). Access to Reliable and Affordable Electricity for all Kenyans–and How Gender Matters.

Sarkar, A., & Singh, J. (2020). Financing energy efficiency in developing countries—lessons learned and remaining challenges. Energy Policy, 38(10), 5560-5571.

Saunders, M., Lewis, P., & Thornhill, A. (2019). Research methods for business students (8th ed.). Pearson

Solovey, M. (2020). *Social Science for What? Battles over Public Funding for the" Other Sciences" at the National Science Foundation*. MIT Press.

Taherdoost, H. (2019). Sampling Methods in Research Methodology: How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management, (IJARM) 5*(2), 18-27.

Taouab, O., & Issor, Z. (2019). Firm performance: Definition and measurement models. *European Scientific Journal*, *15*(1), 93-106.

Teece, D. J. (2020). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, *28*(13), 1319–1350.

Bank, W. (2010). Addressing the electricity access gap. *Washington, DC: World Bank*.

Truong, H. Q., Sameiro, M., Fernandes, A. C., Sampaio, P., Duong, B. A. T., Duong, H. H., & Vilhenac, E. (2017). Supply chain management practices and firms' operational performance. *International Journal of Quality & Reliability Management*, *34*(2), 176-193.

Udoh, H. (2024). *E-Governance Performance in the Context of Developing Countries* (Doctoral dissertation, University of Leicester).

Wakajummah, B., & Kimaku, P. (2023). Influence of energy reforms on Kenya's electricity sector performance. *International Academic Journal of Human Resource and Business Administration*, *4*(3), 186-209.

Wang, K., Lee, C. Y., Zhang, J., & Wei, Y. M. (2018). Operational performance management of the power industry: A distinguishing analysis between effectiveness and efficiency. *Annals*

of Operations Research, 268, 513–537.

Weber, B., Staub-Bisang, M., & Alfen, H. W. (2018). *Infrastructure as an asset class: investment strategy, sustainability, project finance, and PPP*. John wiley & sons.

Wetugi, L. N. (2024). Emerging Issues in Devolved Electricity Governance in Kenya.

Wu, M. J., Zhao, K., & Fils-Aime, F. (2022). Response rates of online surveys in published research: A meta-analysis. *Computers in human behavior reports, 7*, 100206.

Yin, S., Wang, J., Li, Z., & Fang, X. (2021). State-of-the-art short-term electricity market operation with solar generation: A review. *Renewable and Sustainable Energy Reviews*, *138*, 110647.

Zhang, Z., Sangsawang, T., Vipahasna, K., & Pigultong, M. (2024). A mixed-methods data approach integrating importance-performance analysis (IPA) and Kaiser-Meyer-Olkin (KMO) in applied talent cultivation. *Journal of Applied Data Sciences*, *5*(1), 256-267.

Zos-Kior, M., Hnatenko, I., Isai, O., Shtuler, I., Samborskyi, O., & Rubezhanska, V. (2020). Management of the efficiency of energy and resource-saving innovative projects at the processing enterprises. *Management Theory and Studies for Rural Business and Infrastructure Development*, *42*(4), 504-515

APPENDICES

Appendix 1: Letter of Introduction

Ole Sangale Rd, Madaraka Estate,
P.O Box 59857 00200, Nairobi, Kenya.
Cell: +254 703 414/6/7, Twitter: @SBSKenya
Email: info@sbs.ac.ke or vist www.sbs.strathmore.edu

Strathmore UNIVERSITY
BUSINESS SCHOOL

3rd February 2025

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – KOECH, DIANA CHEPKORIR

This is to introduce Koech, Diana Chepkorir who is a Master of Commerce (MCOM) Student at Strathmore University Business School, admission number MCOM/168931. As part of our MCOM Programme, Diana is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MCOM course. To this effect, Diana would like to request appropriate data from your organization.

Diana is undertaking a research paper on "**ASSESSING THE EFFECTS OF PUBLIC FINANCIAL MANAGEMENT ON OPERATIONAL PERFORMANCE IN RURAL ELECTRIFICATION AND RENEWABLE ENERGY CORPORATION."**

The information obtained shall be treated confidentially and shall be used for academic purposes only. Our MCOM Programme seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required. Yours sincerely,

Njoki Kiagiri

Manager – Graduate Programmes

Strathmore University Business School.

Strathmore Business School is a Proud member of:

Association of African Business Schools AABS EFMD AACSB

Appendix 2: Questionnaire

Dear Participant,

Thank you for taking part in this research study. This questionnaire aims to gather information on the strategic management of public financial management practices and their impact on operational performance in REREC. Your responses will be kept confidential and used solely for research purposes.

Section A: Demographic Information Gender: [ ] *Male* [ ] *Female* [ ] *Prefer not to say*

Age group: [ ] 18-30 [ ] 31-40 [ ] 41-50 [ ] 51-60 [ ] *Above 60*

Highest level of education: [ ] *Certificate* [ ] *Diploma* [ ] *Bachelor's degree* [ ] *Master's degree* [ ] *PhD* [ ] *Other* (please specify): _____

Current position: [ ] *Top Management* [ ] *Middle Management* [ ] *Lower Management*

Years of experience in the energy sector: [ ] *Less than 5 years* [ ] *5-10 years* [ ] *11-15 years* [ ] *16-20 years* [ ] *More than 20 years*

Section B: Funding

Statement	1	2	3	4	5
The funds allocated to REREC are sufficient to meet project needs					
Funds are disbursed in a timely manner to support ongoing projects					
Funding streams are predictable and consistent over time.					
Funds are allocated efficiently across different projects and departments.					

Please indicate your level of agreement with the following statements using the scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Section C: Budgeting Processes

Statement	1	2	3	4	5
The budgeting process aligns well with REREC's strategic goals.					

The budget allows for reallocation of funds to address emerging needs.					
The budget approval process is efficient and timely.					
Stakeholders are actively involved in the budgeting process.					

Section D: Financial Reporting

Please indicate your level of agreement with the following statements using the scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Statement	1	2	3	4	5
Financial reports are submitted on time.					
Financial reports are accurate and free from errors.					
Financial information is transparent and easily accessible to stakeholders.					
REREC complies with national and international financial reporting standards.					

Thank you for your participation in this study. Your input is valuable and will contribute to understanding the impact of financial management on operational performance in Kenya's energy sector.

THANK YOU

Appendix 3: Strathmore Institutional Permit

25th February 2025

Ms Koech Diana, diana.chepkorir@strathmore.edu

Dear Ms Koech,

Strathmore UNIVERSITY BUSINESS SCHOOL

RE: Assessing the Effects of Public Financial Management on Operational Performance in Rural Electrification and Renewable Energy Corporation

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2636/25.** The approval period is from **25th February 2025 to 24th February 2026.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU- ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU- ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research- portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier, Chairperson; SU-ISER.

Appendix 4: Nacosti Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **135090**

Date of Issue: **10/March/2025**

RESEARCH LICENSE

This is to Certify that Ms.. Diana Chepkorir Koech of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: ASSESSING THE EFFECTS OF PUBLIC FINANCIAL MANAGEMENT ON OPERATIONAL PERFORMANCE IN RURAL ELECTRIFICATION AND RENEWABLE ENERGY CORPORATION for the period ending : 10/March/2026.

License No: **NACOSTI/P/25/416593**

135090

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix 5: Sampling Frame

Department	Top Management	Middle Management	Lower Management	Total Managers
Finance & Accounts	2	6	10	18
Engineering Services	3	8	12	23
Renewable Energy Development	2	5	7	14
Planning and Strategy	1	4	6	11
Procurement & Supply Chain	2	5	6	13
Monitoring and Evaluation	1	4	5	10
Corporate Services (HR/Admin/Legal)	3	6	9	18
ICT and Innovation	1	3	4	8
Internal Audit	1	2	3	6
Regional Operations (All Regions)	4	28	37	69
TOTAL	**20**	**71**	**99**	**187**