



**QUALITY MANAGEMENT PRACTICES, INNOVATIVENESS, AND
OPERATIONAL PROCESS PERFORMANCE OF PUBLIC ENTITIES IN
UGANDA.**

BY

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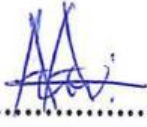
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PLAN A

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DECLARATION

I, Abeko Miriam Agwou hereby declare that this research dissertation is a direct result of my own original ideas and no part of it has been presented for another degree in this University or elsewhere.

Signature 

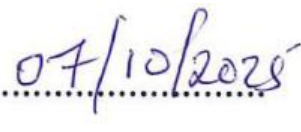
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APPROVAL

This is to certify that this dissertation titled "Quality Management Practices, Innovativeness, and Operational Process Performance of Public Entities in Uganda." has been accepted in partial fulfilment of the requirements for the award of a Master of Business Administration from Makerere University with our approval as the designated University Supervisors.

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Signature  Date..... 

DR. RUTH ATUHAIRE (PhD)

DEDICATION

This dissertation is affectionately dedicated to my cherished mother, Mrs. Agwou Caroline, my siblings Agudo Teddy, Dr.Eng. Ekolu Job, and Ebalu Simon, my esteemed colleague, classmates and friends along with all those who have uplifted me with their encouragement and unwavering support during this endeavor. Your faith in me has been a priceless gift.

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LIST OF ACRONYMS

CFA	Confirmatory Factor Analysis
CVI	Content Validity Index
EFA	Exploratory factor analysis
IFMS	Integrated Financial Management System
KMO	Kaiser-Meyer-Olkin
MEPIN	Measuring Public Innovation
MOFPED	Ministry of Finance, Planning & Economic Development
NAADS	National Agriculture Advisory Services
NWSC	National Water and Sewerage Corporation
OAG	Auditor General's report
PCA	Principle Component Analysis
PEs	Public entities
PVS	The Public Value Scorecard
QMPs	Quality management practices
RBV	Resource-based view
SDGs	Sustainable Development Goals
UBC	Uganda Broadcasting Corporation
VIF	Variance inflation factor

ABSTRACT

Operational process performance is essential for public entities, influencing cost-effectiveness, service quality, public trust, and social impact. These entities play a critical role in supporting economic growth and delivering necessary services to citizens. However, many governments, including Uganda, face challenges with poor operational process performance, often attributed to inefficiencies in the utilization of allocated funds. Reports, such as the Auditor General's (OAG) report (2023), highlight a persistent gap between budgeted and actual expenditures, reflecting these inefficiencies. In Uganda, public entities have been marked by suboptimal operational performance due to deficient quality management practices (QMP) and limited innovativeness.

Despite these challenges, few studies have examined how QMP and innovativeness work together to improve operational process performance in public entities. This study aimed to investigate the relationship between quality management practices, innovativeness, and operational process performance among public entities (PEs) in Uganda.

A quantitative cross-sectional research design was adopted, with a sample size of 92 PEs selected from 120 through simple random sampling. Data were successfully collected from 75 PEs, resulting in an 82% response rate. The unit of analysis was the PE, with the unit of inquiry being at least two senior managers—Operations Manager and Finance Manager—purposely selected. Primary data were gathered through a self-administered questionnaire based on a 5-point Likert Scale and analyzed using SPSS.

The findings indicated that quality management practices and innovativeness predict 77.9% of the variance in operational process performance. Additionally, both factors were positive and significant predictors of operational process performance at a 95% confidence level.

To enhance operational process performance in Uganda's public entities, it is recommended that these entities strengthen their quality management practices by focusing on citizen-centered approaches, fostering teamwork, encouraging employee involvement, promoting continuous improvement, and ensuring strong top management support. Cultivating a culture of innovation is equally important, particularly in the areas of service innovation, process innovation, and administrative innovation. These combined efforts will improve efficiency, resource utilization, and service delivery, ultimately leading to better public trust and sustainable social impact.

CHAPTE ONE

INTRODUCTION

1.1 Background to the study

At both the national and international levels, there has been an increase in interest and focus in recent years regarding the operational process performance of public entities (Abdeldayem & Al Dulaimi, 2022)(*UN E-Government Survey 2022*, n.d.). This is due to the critical role that public entities play in supporting economic growth and delivering necessary services to citizens, and the potential negative effects that their activities may have on society (Tan, Mahula, & Cromptvoets, 2022). Similarly, public entities are crucial to achieving the Sustainable Development Goal (SDG 16 – Peace, Justice and Strong Institutions) and the 2030 Agenda for Sustainable Development (United Nations, 2021). In terms of cost-effectiveness, service quality, public trust, and social impact, operational process performance is crucial for public entities (Ogah & Nwokolo, 2022). The operations process performance of public entities has drawn interest throughout the world.

Globally, there have been instances of public organizations' operations being compromised (World Public Sector Report, 2021). Poor operational process performance has been a problem for most governments around the world. While the specific problems may differ, there is evidence to support the idea that inefficient and ineffective operational processes can impair the operation and effectiveness of governmental organizations. For instance, Eskom in South Africa, has long-standing operational and financial issues and struggles to maintain its outdated power facilities, which frequently causes blackouts and load shedding (Oxford Analytica, 2018). Similarly, the Philippine National Railways (PNR), has experienced numerous operational and safety concerns (Shahrir & Manan, 2021). Due to mismanagement, corruption, and a lack of investment, Pakistan Steel Mills, has declined for many years (Iftikhar, 2015). According to some reports, up to 50% of

the Brazilian Post Office's revenue may be lost to fraud and waste, which has led to accusations of corruption and poor service quality (Brazil Country Report, 2022). These examples strengthen the justification for this study by summarizing existing cases globally and showing gaps in effective operational process management.

The situation with public entities in Uganda is likewise similar; reports have continued to point out instances of subpar Operational process performance. For instance, evidence of the poor Operational Process Performance of Public Entities in Uganda has been noted in the Auditor General's report [OAG] (2023) which indicates that the revenue budget for the financial year of 2022/2023, a recent revision of budgetary allocations which resulted in a significant discrepancy between projected revenues and expenditures. Specifically, the total revenue was revised to UGX 48.136 trillion, while the expenditure budget was adjusted to UGX 52.548 trillion, culminating in an unbalanced budget of UGX 4.412 trillion. Such figures raise critical concerns regarding inadequate operational process performance of public entities in Uganda. These revisions and the subsequent unbalanced budget signify challenges faced by public entities in effectively managing their operational processes. The discrepancy between the budgeted and actual figures highlights potential inefficiencies, inadequate financial controls, and a lack of effective operational oversight. Furthermore, the examination of warrants during the financial year provides another dimension to the evidence of poor public service delivery in Uganda. Out of the total warrants issued, amounting to UGX 49.226 trillion, only UGX 43.404 trillion was spent leaving an unutilized balance of UGX 5.822 trillion, representing a performance level of 88.2%. The substantial unutilized balance is a clear indication of inefficiencies in the utilization of allocated funds, reflecting a gap between budgeted and actual expenditures. Such underutilization may adversely impact public service delivery as resources earmarked for critical services remain unspent.

The Office of the Auditor General (OAG) report for the financial year concluding on June 30, 2023, highlights significant concerns regarding supplementary expenditure management in Uganda. The total supplementary expenditure for this fiscal period reached UGX 4.417 trillion, a considerable figure that warrants careful scrutiny. Notably, of this total, UGX 1.437 trillion, which constitutes 2.99% of the total supplementary expenditure, was authorized under the Public Finance Management Act (PFMA) provisions, specifically the 3% allocation granted to the Minister of Finance, Planning and Economic Development for the authorization of supplementary budgets. Furthermore, the overall expenditure budget for the fiscal year was revised to UGX 52.548 trillion. However, the actual funding secured amounted to only UGX 49.226 trillion, resulting in a substantial funding deficit of UGX 2.322 trillion. This discrepancy illustrates a critical shortfall in revenue generation relative to budgetary commitments, exacerbating the financial challenges faced by the government.

The recurrent approval of supplementary budgets without corresponding financing sources points to deeper fiscal indiscipline.

The collective evidence from OAG (2023) emphasizes that poor operational process performance of Ugandan public entities is attributable to weak Quality Management Practices (QMPs) and limited innovativeness. The observed discrepancies between the budgeted and actual figures reveal potential inefficiencies, inadequate financial controls, and a deficiency in effective operational oversight. This not only compromises the financial health of public entities but also raises concerns about their ability to deliver essential services efficiently. Quality Management Practices emphasize teamwork, continuous improvement, and top management support ((Bouranta et al., 2019); Stringham, 2004; Milakovich, 1991), while innovativeness in service, process, and

administration fosters adoption of modern solutions (Ferraris et al., 2020). Together, these approaches contribute to a more efficient, citizen-centric, and resilient public service delivery system.

Furthermore, Public entities such as the National Water and Sewerage Corporation (NWSC), a state-owned provider of water and sewage services, has come under fire for its weak operational process performance because of persistent water shortages, insufficient water pressure, and sewage facilities. Reports imply that employees may have engaged in bribery and embezzlement, and the business has also been accused of corruption and poor management (World Bank, 2020). Uganda Broadcasting Corporation (UBC), has suffered from several operational and financial problems, including outdated equipment, low employee morale, and rising debt (The Parliamentary Commission report, 2023). Since the relaunch of Uganda Airlines in 2019, reports of inadequate management techniques and a lack of economies of scale have been blamed for the company's high operational costs (The Africa report, 2021). With accusations of corruption, poor management, and politicization, National Agriculture Advisory Services (NAADS), has come under fire for its subpar performance in providing agricultural services to farmers (Joseph, 2018). Funds intended for farmer support have allegedly been misappropriated by government officials and other actors. These highlight systemic inefficiencies in Uganda's public sector, necessitating policy interventions such as the Public Finance Management Act reforms and the Anti-Corruption Policy. However, the limited success of these interventions reflects a gap in achieving desired outcomes.

The Public Value Scorecard (PVS) framework is used in this study to explain operational process performance. The Resource-Based View (RBV) (Barney, 1991) emphasizes the role of internal

resources and capabilities, while the Dynamic Capabilities Theory (Teece & Pisano, 2003) highlights adaptability and innovation. RBV recognizes QMPs as critical intangible resources (Mukami & Kiiru, 2019; Kihugwa & Machoka, 2020), while Dynamic Capabilities theory stresses an organization's ability to adjust through innovation (Kuo et al., 2017). Together, they complement the PVS framework. Hypotheses 1 and 2 are informed by RBV and Dynamic Capabilities Theory respectively. However, one of the theories (RBV) appears partly redundant in explaining adaptability; therefore, Dynamic Capabilities offers stronger justification.

Although QMP and innovativeness have been studied independently (Hellman & Liu, 2013; Lopes et al., 2022), few studies examine their combined impact. This research therefore examines the combined effect of QMP and innovativeness on operational process performance in Ugandan public entities.

1.2 Problem statement

Effective and efficient operational process performance in public entities is vital for economic growth, poverty reduction, and socio-cultural transformation in Uganda (Alghamdi, 2018). However, persistent challenges in operational process performance, including poor service delivery, inefficiencies, and high operational costs, have been well-documented in Uganda's public sector (OAG, 2023; Parliament Watch, 2023). These challenges manifest across key proxies of operational process performance: service delivery (e.g., delayed or inadequate access to services like water and agricultural support), efficiency (e.g., underutilization of allocated funds), and effectiveness (e.g., failure to meet intended service outcomes) (OAG, 2023; World Bank, 2022). The Auditor General's report (OAG, 2023) highlights a budget deficit of UGX 4.412 trillion for the 2022/2023 financial year, resulting from revised revenue (UGX 48.136 trillion) and

expenditure (UGX 52.548 trillion) budgets, indicating poor financial management and operational oversight. This deficit has led to significant consequences, including a 12% reduction in planned service delivery activities, affecting access to essential services like healthcare (e.g., 15% of health facilities reported stock outs of critical supplies) and education (e.g., 20% of schools reported delays in capitation grants) (OAG, 2023; Ministry of Health, 2023). Additionally, an unutilized balance of UGX 5.822 trillion (88.2% performance level) reflects inefficiencies, with 10% of public entities reporting delays in project implementation and 25% of citizens expressing dissatisfaction with service quality (UBOS, 2023). These issues are compounded by fiscal indiscipline, with supplementary budgets approved without corresponding revenue sources, resulting in a funding shortfall of UGX 2.322 trillion, which further hampers service delivery (OAG, 2023). The root causes include deficient Quality Management Practices (QMP), such as inadequate citizen focus and continuous improvement, and limited innovativeness, such as the lack of service and process innovations, as noted in prior studies ((Bouranta et al., 2019); Ferraris et al., 2020). Despite interventions like the Integrated Financial Management System (IFMS), these systemic issues persist, compromising public entities' ability to deliver high-quality services efficiently. Previous research has paid insufficient attention to the combined influence of QMP and innovativeness on operational process performance in Uganda's context (Baldwin et al., 2022). This study investigates how QMP and innovativeness can address these operational challenges to enhance service delivery, efficiency, and effectiveness in Ugandan public entities.

1.3 Purpose of the study

The purpose of this study is to examine the relationships between Quality Management Practices (QMP), innovativeness, and operational process performance among public entities in Uganda, and to assess their combined effect on enhancing service delivery, efficiency, and effectiveness.

1.4 Research Objectives

- i. To examine the relationship between Quality Management Practices and operational process performance in Ugandan public entities.
- ii. To examine the relationship between innovativeness and operational process performance in Ugandan public entities.
- iii. To assess the combined effect of Quality Management Practices and innovativeness on operational process performance in Ugandan public entities.

1.5 Research Questions

To achieve the above research objectives, the following research questions form the basis of the study.

- i. What is the relationship between Quality Management Practices and operational process performance in Ugandan public entities?
- ii. What is the relationship between innovativeness and operational process performance in Ugandan public entities?
- iii. What is the combined effect of Quality Management Practices and innovativeness on operational process performance in Ugandan public entities?

1.6 Research Hypotheses

The study tests the following hypotheses, aligned with the conceptual framework:

1. H1: Quality Management Practices have a significant positive effect on operational process performance in Ugandan public entities.
2. H2: Innovativeness has a significant positive effect on operational process performance in Ugandan public entities.
3. H3: Quality Management Practices and innovativeness have a significant combined effect on operational process performance in Ugandan public entities.

1.6 Significance of the Study

The study's significance is categorized as follows:

1.6.1 Theoretical Significance

The study contributes to the existing literature by exploring the combined influence of Quality Management Practices and innovativeness on operational process performance, particularly from an African perspective. It integrates the Resource-Based View (RBV) and Dynamic Capabilities Theory to provide a robust theoretical framework for understanding how these factors enhance public sector performance, addressing a gap in context-specific research (Baldwin et al., 2022).

1.6.2 Practical Significance

The findings offer insights for managers of public entities on prioritizing QMP (e.g., citizen focus, continuous improvement) and fostering a culture of innovation (e.g., adopting new

technologies). These strategies can streamline operations, enhance service delivery, and improve efficiency and effectiveness, ensuring consistency across organizational levels.

1.6.3 Policy Significance

The study informs policymakers on developing policies that promote QMP and innovation in public entities. It highlights specific resources and support needed to overcome barriers to adopting QMP and implementing innovative initiatives, potentially guiding the revision of frameworks like the Public Finance Management Act to enhance operational performance.

1.7 Scope of the Study

This study focuses on the operational process performance of public entities in Uganda, examining the influence of Quality Management Practices (QMP) and innovativeness. The content scope includes QMP (measured by citizen focus, teamwork, employee involvement, continuous improvement, and top management support) and innovativeness (measured by service, process, and administrative innovation) as independent variables, with operational process performance (measured by service delivery, efficiency, and effectiveness) as the dependent variable. The Resource-Based View (RBV) and Dynamic Capabilities Theory provide the theoretical framework. Geographically, the study covers public entities across Uganda, including agencies and authorities in sectors such as water, agriculture, transport, and broadcasting, to ensure a comprehensive national perspective. Data were collected from 75 public entities, selected via simple random sampling, to reflect regional and sectoral diversity (OAG, 2023).

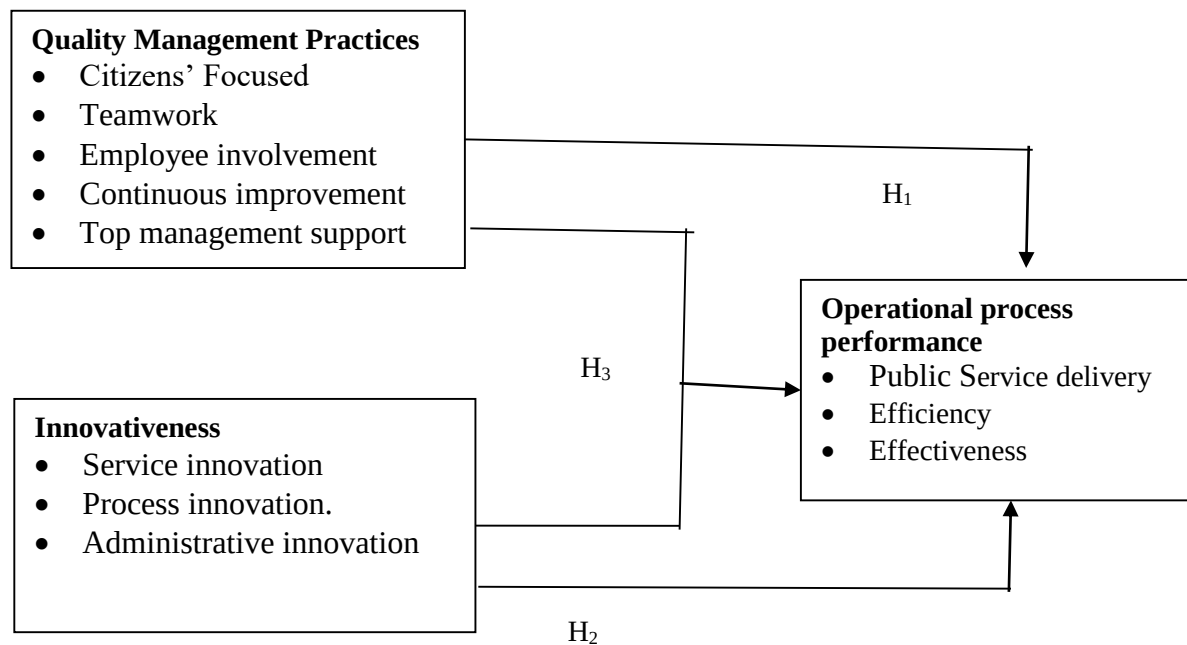
1.7.3 Geographical scope

The study was carried out in Public Entities in Uganda located across the Country. A cross Country study was adopted to provide a comprehensive understanding of the operational process performance in the entire country and to provide regional comparisons given the high questionability of their operational process performance in the recent past.

1.8 Description of the conceptual framework

The conceptual framework adopts a theoretical integration approach, combining the Resource-Based View (RBV) and Dynamic Capabilities Theory to examine how Quality Management Practices (QMP) and innovativeness influence operational process performance in Ugandan public entities. The framework posits three key relationships: (1) QMP directly affects operational process performance, (2) innovativeness directly affects operational process performance, and (3) QMP and innovativeness have a combined effect on operational process performance. QMP is measured by citizen focus, teamwork, employee involvement, continuous improvement, and top management support ((Grandzol & Gershon, 1998); Lopes et al., 2022). Innovativeness is measured by service, process, and administrative innovation ((Evans & Lindsay, 2008); (Bon & Mustafa, 2013)). Operational process performance is measured by service delivery, efficiency, and effectiveness (Bouckaert & Peters, 2002; Chinyamurindi & Smith, 2016). The framework, supported by prior studies (Freeman, 1984; Moore, 1995; (Alghamdi, 2018)), suggests that these variables collectively enhance public sector performance.

Figure 1: Conceptual framework



Source: Freeman (1984); Freeman (1984); Moore (1995); Prajogo et al., 2004)Schouten & Benington (2010); (Alghamdi, 2018); Sadik and Elshazly (2019).

Explanations.

Figure 2: Conceptual framework shows that Quality Management Practices measured by Citizens' Focused, Teamwork, Employee involvement, Continuous improvement and Top management support, and Innovativeness measured by Service innovation, Process innovation, Administrative innovation are independent variables, while Operational process performance is the dependent variable measured by Public Service delivery, Efficiency, Effectiveness. The model suggests that there is a relationship between Quality Management Practices, Innovativeness and Operational process performance. Specifically, the conceptual model suggests that Quality Management Practices can be significantly related to Operational process performance; Innovativeness can be significantly related to Operational process performance, and that there is a significant combined

effect of Quality Management Practices and Innovativeness on Operational process performance of public entities in Uganda.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a comprehensive review and synthesis of existing scholarly works and studies related to the research topic. In this study, the objective is to examine the effect of quality management practices and innovativeness on operational process performance in Ugandan Public entities. Therefore, the literature review aims to explore and analyze previous research, theories, models, and empirical evidence relevant to quality management practices, innovativeness, and operational process performance in both public and organizational contexts.

2.1 Theoretical underpinnings

In the domains of management and organizational studies, there has been a growing interest in the connection between operational process performance, innovativeness, and quality management practices (QMPs) among public entities (PEs). This examines existing research on these interrelated constructs, framed through the lenses of the RBV and Dynamic Capabilities Theory. This review shows the significance of internal resources and capabilities in achieving superior performance outcomes.

Resource-Based View (RBV)

The RBV provides a foundational framework for understanding how internal resources contribute to competitive advantage (Barney, 1991). The RBV emphasizes that organizations are composed of a bundle of resources, which can be broadly classified into tangible and intangible categories (Nwafor, 2020). Tangible resources include financial, physical, technological, and organizational assets, while intangible resources encompass human, innovation, and reputational resources

(Mukami & Kiiru, 2019). The effective management of these resources is critical for organizations seeking to enhance their performance.

A core tenet of the RBV is that organizational resources must possess certain characteristics namely, they should be rare, valuable, inimitable, non-substitutable, and heterogeneous (Rehmani et al., 2020; Salah, 2018; Shengeza, 2017). These characteristics enable firms to achieve sustainable competitive advantages over their rivals (Othman et al., 2020; Zimon, 2019). For instance, quality management practices are often categorized as intangible resources that contribute to organizational success (Kihugwa & Machoka, 2020; Salimian et al., 2021; Waduu & Rugami, 2019). QMPs encompass routine activities aimed at enhancing output quality, thereby constituting unique business processes that drive overall performance (Elhawwi et al., 2021).

However, one of the primary criticisms of the RBV is its static nature. The theory assumes that resources and capabilities remain relatively unchanged despite the dynamic nature of external environments (Mukami & Kiiru, 2019; Rehmani et al., 2020; Salah, 2018). This static perspective can limit organizations' ability to adapt to changing market conditions, as it fails to account for the need for continuous innovation and evolution in response to external pressures (Ahmed & Siddiqui, 2020; Meta, 2019). Consequently, while the RBV provides valuable insights into the importance of internal resources, it may not fully explain how organizations navigate the complexities of a rapidly changing business landscape.

Dynamic Capabilities Theory

To address the limitations of the RBV, (Teece & Pisano, 2003) introduced the Dynamic Capabilities Theory, which emphasizes an organization's ability to adapt, innovate, and develop new capabilities in response to environmental changes. This theory posits that organizations with

robust dynamic capabilities are better positioned to achieve operational excellence and superior performance (Kuo et al., 2017).

The significance of dynamic capabilities is particularly pronounced in the context of quality management and innovation. As Kafetzopoulos and Gkana (2015) argue, the rapidly changing external environment necessitates that organizations prioritize quality and innovation practices to maintain a competitive advantage and ensure long-term survival. Total quality management (TQM) and innovation share a common goal of aligning organizational purpose and function to enhance stakeholder satisfaction and improve competitive positioning (Bon & Mustafa, 2013). This alignment is achieved through the optimization of employee roles in management and business processes, fostering a culture of continuous improvement.

Furthermore, the ability to innovate is often seen as a product of continuous learning processes that generate new products, processes, and systems, ultimately leading to increased profitability (Breznik & Hisrich, 2014). The Dynamic Capabilities Theory complements the RBV by recognizing that firms must be proactive and capable of adapting to changing circumstances to leverage their resources effectively. This adaptability is crucial for organizations seeking to enhance their QMPs, foster innovativeness, and optimize operational processes over time.

2.2 Quality Management Practices

Quality management practices (QMPs) play a pivotal role in enhancing organizational performance by improving the quality of products and services. The conceptual framework of Quality Management (QM) is primarily built upon a set of principles, practices, and techniques (Salah, 2018). Each principle is operationalized through specific practices, which can be defined as habitual or routine activities that organizations undertake to achieve their quality objectives

(Agyei et al., 2021; Ukab, 2021). This synthesizes existing research on key QMP dimensions, including citizens' focus, teamwork, employee involvement, continuous improvement, and top management support. Each of these practices will be defined and contextualized within the broader framework of quality management, highlighting their significance, interrelationships, and the gaps in the current literature.

Citizens' Focus

Citizens' focus refers to the commitment of organizations to understand and meet the needs and expectations of their constituents. This practice emphasizes the importance of customer satisfaction as a primary objective of quality management. According to Zeithaml et al. (1996), a citizen-focused approach involves gathering feedback from the public to improve service delivery and foster a responsive organizational culture. This practice is rooted in the belief that understanding the voice of the citizen is essential for effective public service management (Parasuraman et al., 1988).

Despite the recognized importance of citizens' focus, gaps exist in the empirical literature regarding its implementation in various contexts. For instance, while some studies highlight best practices in citizen engagement (Bovens et al., 2008), others point to challenges such as bureaucratic inertia and inadequate feedback mechanisms (Fung, 2006). This inconsistency suggests that further research is needed to explore the most effective strategies for fostering a citizen-focused culture across diverse organizational settings.

Teamwork

Teamwork is another essential QMP that enhances organizational performance by fostering collaboration and collective problem-solving. Katzenbach and Smith (1993) define teamwork as a

coordinated effort by a group of individuals working towards a common goal, leveraging each member's strengths to achieve superior outcomes. In the context of quality management, teamwork facilitates the sharing of knowledge and skills, leading to improved service delivery and innovation (Baker et al., 2006).

The literature on teamwork in quality management highlights its positive impact on employee morale and organizational effectiveness (Salas et al., 2015). However, challenges such as interpersonal conflicts and lack of clear communication can hinder effective teamwork (Tuckman, 1965). Despite the recognition of teamwork's significance, there remains a need for more empirical studies that examine the dynamics of teamwork in different organizational contexts and its direct impact on quality outcomes.

Employee Involvement

This is the active participation of employees in decision-making processes and quality improvement initiatives. This practice is grounded in the belief that employees are valuable sources of insight and innovation (Lawler, 1992). According to Gibbons (2006), involving employees in quality management not only enhances their commitment but also leads to better problem-solving and increased organizational performance.

Research indicates that organizations that prioritize employee involvement tend to experience higher levels of job satisfaction and lower turnover rates (Kirkman & Rosen, 1999). However, despite the positive correlation between employee involvement and quality outcomes, gaps remain in understanding the specific mechanisms through which involvement influences quality management practices

Continuous Improvement

This is a fundamental principle of quality management that focuses on ongoing efforts to enhance processes, products, and services. Deming (1986) defines continuous improvement as a systematic approach to identifying and eliminating inefficiencies through iterative cycles of planning, doing, checking, and acting (PDCA). This practice is essential for organizations seeking to adapt to changing environments and maintain competitiveness.

The literature on continuous improvement emphasizes its role in fostering a culture of innovation and responsiveness (Imai, 1986). However, challenges such as resistance to change and lack of resources can impede continuous improvement efforts (Bessant & Caffyn, 1997). Additionally, while many organizations adopt continuous improvement frameworks, there is a need for more empirical studies that explore the long-term impacts of these practices on organizational performance and citizen satisfaction.

Top Management Support

This is critical for the successful implementation of QMPs, as it sets the tone for organizational culture and resource allocation. Top management must demonstrate a commitment to quality by providing the necessary resources, establishing clear quality objectives, and fostering a culture that values quality at all levels (Juran, 1995). Research has shown that strong leadership support is positively correlated with the successful adoption of quality management practices (Baker et al., 2006).

Despite the acknowledged importance of top management support, gaps exist in understanding the specific behaviors and strategies that effective leaders employ to promote quality management (Kirkpatrick & Locke, 1996). Furthermore, the literature often fails to address the potential

challenges leaders face in balancing quality initiatives with other organizational priorities, suggesting a need for more nuanced research in this area.

2.3 Innovativeness

Innovativeness in the public sector has garnered significant attention in recent years, particularly as it pertains to enhancing public administration and service delivery. Bloch (2010) asserts that this concept encompasses substantial improvements that can manifest in various forms, including service innovation, process innovation, and administrative innovation. Each of these categories presents unique opportunities and challenges for public sector organizations, and understanding their implications is crucial for fostering a culture of innovation within this sector.

Public sector innovation can be delineated through frameworks borrowed from the private sector. These frameworks define public sector innovation as the introduction of new or significantly improved operations or products by public organizations. Such innovations not only aim to enhance the efficacy of public services but also strive to respond to the evolving demands of citizens and stakeholders (Breznik & Hisrich, 2014).

The concept of innovativeness extends beyond mere novelty; it emphasizes the implementation of new ideas that yield beneficial outcomes. Breznik and Hisrich (2014) elaborate on this by suggesting that innovativeness involves the generation of new ideas and knowledge that can lead to enhanced business outputs, focusing on the development of internal processes and structures to better meet consumer needs. This perspective is echoed by Al-Hakim and Hassan (2013), who highlight the transformative potential of innovation in shaping organizational capabilities.

Caniato, Caridi, and Moretto (2013) provide a complementary viewpoint, defining innovativeness as a change that fosters profitability and operational harmony. They argue that effective innovation serves as a competitive advantage, enabling organizations to improve performance and mitigate risks. This alignment with Schumpeter's (1934) foundational theories on innovation underscores the enduring relevance of innovativeness in navigating the complexities of modern organizational landscapes.

The concept of innovativeness in this context can be examined through three primary dimensions: service innovation, process innovation, and administrative innovation.

Service Innovation

The provision of new or greatly enhanced services that raise the standard of public service delivery is referred to as service innovation in the public sector. Research indicates that service innovation can lead to increased citizen satisfaction and improved outcomes in areas such as healthcare, education, and public safety (Osborne et al., 2016). For instance, the integration of digital technologies into public services has transformed how citizens interact with government agencies, facilitating greater accessibility and efficiency (Bertot et al., 2010).

Despite the recognized importance of service innovation, gaps remain in understanding the factors that drive successful implementation. While existing studies highlight the role of leadership and organizational culture in fostering innovation (Walker, 2006), there is a lack of empirical research examining how these factors interact with specific service contexts. Furthermore, the impact of citizen engagement in the co-creation of services is an area ripe for exploration, as it may provide insights into how public organizations can better meet the needs of their constituents (Bovens et al., 2008).

Process Innovation

This involves the enhancement of internal processes to improve efficiency and effectiveness within public organizations. This dimension of innovativeness is particularly critical in the public sector, where resource constraints and accountability demands necessitate continuous improvement (Pina et al., 2017). The adoption of process innovations, such as lean management techniques and performance measurement frameworks, has been shown to yield significant benefits in terms of cost reduction and service quality (Radnor et al., 2014).

However, the literature on process innovation in the public sector is still developing. While some studies have identified best practices and success factors (Damanpour & Schneider, 2006), there is a need for more comprehensive frameworks that encompass the complexities of public sector dynamics. For example, the interplay between bureaucratic structures and innovative practices is an area that warrants further investigation. Additionally, the role of technology in facilitating process innovation, particularly in light of the COVID-19 pandemic, presents an opportunity for future research (Mergel et al., 2020).

Administrative Innovation

This refers to the implementation of new organizational structures, processes, or routines that enhance the effectiveness of public administration. This dimension of innovativeness is critical in addressing the challenges posed by complex governance structures and the need for adaptive management in the public sector (Osborne, 2010). Recent studies have highlighted the importance of administrative innovation in fostering collaboration among public agencies and improving inter-organizational coordination (Kettunen, 2020; Migdadi et al., 2017).

However, the literature on administrative innovation is still in its nascent stages, with significant gaps in understanding the mechanisms through which administrative innovations are developed and implemented. For instance, while some studies have identified the role of leadership in driving administrative change (Breznik & Hisrich, 2014), there is limited empirical evidence on success of administrative innovations. Furthermore, the interplay between administrative innovation and other forms of innovativeness, such as service and process innovation, remains underexplored.

2.4 Operational process performance

Operational Performance refers to measuring how effectively and efficiently actions are executed. Effectiveness indicates how well customer needs are fulfilled, whereas efficiency assesses how economically a company uses its resources to achieve customer satisfaction (Bag et al., 2020). Operational process performance in public entities is the extent to which organizational processes and activities are executed and managed effectively, resulting in the timely delivery of high-quality services, optimal resource utilization, and the achievement of organizational goals and objectives. Operational process performance refers to the degree to which operational processes and workflows are streamlined, standardized, and executed with minimal errors and delays, ensuring the efficient utilization of resources and the delivery of quality services to stakeholders (Oke, 2022). Efficiency refers to the utilization of resources (such as time, money, and personnel) in an optimal and cost-effective manner to achieve desired outputs or outcomes. It is a measure of how well an organization or public entity minimizes waste, reduces unnecessary steps or delays, and maximizes productivity in executing operational processes. Efficient processes aim to achieve the desired results with the least amount of resources (Khan and Naeem, 2016). Effectiveness is the extent to which operational processes and activities produce the desired results or outcomes in alignment with established goals and objectives (Oke, 2022). It focuses on the degree to which the

execution of processes achieves the intended purpose and delivers the intended impact or value. Effective processes ensure that the desired outcomes are achieved in a meaningful and satisfactory manner.

2.5 Quality management practices and operational process performance

The interplay between QMPs and operational performance has garnered significant attention in academic discourse, with a substantial body of literature underscoring a positive correlation between the two (Chatzoglou, Chatzoudes, & Kipraios, 2015; Prajogo, Huo, & Han, 2012). The evidence suggests that effective QMPs can enhance various dimensions of organizational performance, particularly through mechanisms such as customer focus, which can lead to reduced complaints and heightened customer satisfaction (Das, Handfield, Calantone, & Ghosh, 2000). Furthermore, robust process management and supplier engagement are pivotal in ensuring that products align with customer specifications, thereby elevating production standards and overall product quality (Prajogo et al., 2012; Grandzol & Gershon, 1998).

Most studies reveal that the successful realization of quality initiatives necessitates a synergistic application of both soft and hard QMPs (Ali, Khairul, 2020; Othman et al., 2020; Zimon, 2019). The implementation of QMPs has been shown to yield improvements across various performance metrics within organizations. Soft QMPs including leadership engagement, top management commitment, customer orientation, and human resource development create an environment conducive to the effective execution of hard QMPs (Mukami & Kiiru, 2019; Rehmani et al., 2020; Salah, 2018). Conversely, the implementation of hard QMPs has been linked to enhancements in quality and financial performance (Wambui & Bett, 2019), as well as operational performance and productivity gains (Baird et al., 2011; Murenga & Njuguna, 2020; Sharma & Joshi, 2020).

Despite the prevailing consensus regarding the positive relationship between QMPs and organizational performance, some scholars caution that the two dimensions of QMPs contribute to performance outcomes in varying manners. For instance, Ali and Khairul (2020) concluded that soft QMPs are the primary drivers of firm performance, while Agyei et al. (2021) argued that hard QMPs can enhance organizational performance independently of soft QMPs. Additional studies have posited that soft QMPs may exert a more pronounced influence on organizational performance compared to hard QMPs (Abdullahi & Bett, 2018; Murenga & Njuguna, 2020; Sharma & Joshi, 2020).

According to the argument in favour of soft QMPs, the existence of hard QMPs alone is not enough to ensure successful organisational outcomes in the absence of soft components like dedicated management, a cohesive organisational vision, and effective leadership. Kaynak (2003) and Dow et al., (1999) emphasized the critical role of soft QMPs, particularly leadership and top management support, in achieving high levels of quality success.

Conversely, there is also substantial evidence indicating that hard QMPs can enhance organizational performance. For example, Zu (2009) conducted a study to assess the effects of QMPs on quality performance among manufacturing plants in the United States. Utilizing data from 226 manufacturing plants and employing SEM for analysis, the study concluded that hard QMPs, positively influenced the quality performance of manufacturing firms. Baird et al. (2011) similarly demonstrated that hard QMPs directly enhanced inventory management performance while also showing an indirect effect on quality performance, based on a survey of 364 business units in Australia.

Despite these discrepancies, a consensus emerges across much of the QMP literature, asserting that the implementation of QMPs facilitates improvements in operational performance (Chung, Hsu, & Tsai, 2010; Khan et al., 2020; Jaskyte, 2020; Srimarut & Mekhum, 2020). This consensus highlights the importance of integrating both soft and hard QMPs to maximize the potential for enhanced operational effectiveness and overall organizational success.

While the literature presents a complex and sometimes contradictory landscape regarding the relationship between QMPs and operational process performance, it is evident that both soft and hard QMPs play critical roles in fostering improvements across various performance metrics. Future research should aim to reconcile these differing perspectives and explore the nuanced interactions between soft and hard QMPs, as well as their combined effects on organizational outcomes.

2.6 Innovativeness and operational process performance

The importance of innovation as an engine for improved operational performance has been recognised in numerous studies. Kaynak (2003) posits that ongoing efforts to refine processes can lead to superior product performance, while simultaneously minimizing redundancies and errors within production workflows. This, in turn, contributes to heightened customer satisfaction, a finding echoed by Rahman and Bullock (2005), who emphasize the link between operational efficiency and customer-centric outcomes.

Moreover, both incremental (small, gradual improvements) and radical innovations (significant breakthroughs that disrupt markets) often stemming from employee-generated ideas have been identified as critical factors in improving operational performance (Alon & Cui, 2011; Pinho,

2008). The dual nature of these innovations suggests that organizations must cultivate a culture that encourages creativity and experimentation at all levels.

For instance, García-Rodríguez et al. (2008) suggest that organizations that invest in innovative practices are likely to reap financial rewards, thereby reinforcing the strategic importance of innovation in operational contexts.

Despite the general consensus, some studies have reported conflicting results. Abrunhosa and Sa (2008) highlight the inconsistencies in research findings regarding the relationship between innovativeness and operational performance. This discrepancy may arise from the varying dimensions of innovation considered in different studies. For instance, Przychodzen, Leyva-de la Hiz, and Przychodzen (2020) and Srimarut and Mekhum (2020) argue that many studies have approached innovation from a one-dimensional perspective, which may not fully capture its complexity.

Conversely, a multidimensional approach has been advocated by several scholars, with distinctions often made between product and process innovations (Escrig-Tena et al., 2018; Iswanto et al., 2020) or between incremental and radical innovations (Duhaylongsod & De Giovanni, 2019; Sadikoglu & Zeir, 2010). The recognition of these multiple dimensions is crucial for understanding the nuanced relationship between innovativeness and operational performance.

2.7 Quality management practices and innovativeness

The significance of innovation and quality management has driven researchers to explore various factors that promote innovation and to discover new methods of fostering it through quality management practices.

Innovation is widely acknowledged as a critical driver of competitive advantage and organizational success in today's dynamic business environment (Khan & Naeem, 2018). Consequently, scholars have endeavored to pinpoint the elements that promote innovation, with a particular focus on the role of QMP. Although the literature presents a range of findings—some suggesting a positive correlation between QMP and innovation, while others indicate potential barriers—there is a growing consensus that QMP can enhance a firm's innovative capabilities (Parra, Jimenez-Jimenez, & Martínez-Lorente, 2014; Pinho, 2008).

The theoretical foundation supporting the positive relationship between QMP and innovation is multifaceted. Proponents argue that organizations that integrate QMP into their culture create an environment conducive to innovation (Dean & Evans, 1994; Kanji, 1996; Mahesh, 1993; Roffe, 1999; Tang, 1998). For instance, the principle of customer focus encourages firms to continuously explore new customer needs and expectations, prompting innovative product development as a response to market changes (Juran, 1988). Furthermore, the commitment to continuous improvement fosters a culture of change and creativity in organizational processes. Empowerment, involvement, and teamwork are also critical elements that significantly influence the success of innovation initiatives. According to Deming, QMP practices enhance innovation performance by establishing systems that facilitate the emergence of new ideas and promoting a culture of continuous improvement (Sadikoglu & Zehir, 2010).

Some research indicates that organizations with robust QMP frameworks are more likely to report higher levels of innovation (Sadikoglu & Zehir, 2010). Conversely, other studies suggest that organizations may experience innovation stagnation as a result of stringent quality management

practices (Prajogo & Sohal, 2016). This dichotomy underscores the need for further investigation into the conditions under which QMP can effectively support or hinder innovation.

2.8 Quality management, innovativeness, and operational process performance

A growing body of research suggests that effective implementation of QMP can lead to improved innovation (Moreno-Luzón et al., 2013) and, consequently, better operational and financial outcomes (Sila, 2020). This interrelationship shows the necessity for a nuanced understanding of these constructs.

The existing literature indicates a potential interplay among QMP, innovativeness, and operational process performance. However, the number of studies explicitly examining these relationships remains limited (Akgün et al., 2013; Kafetzopoulos et al., 2019). Most of the research to date has identified innovativeness as a mediating factor linking QMP to performance outcomes (Akgün et al., 2013; Kafetzopoulos et al., 2019; Sadikoglu & Zehir, 2010; Wilson & Slobodzian, 2019). This suggests that organizations that effectively implement quality management practices may foster a culture of innovation that subsequently enhances their operational performance and financial results.

Contrarily, some studies present findings that challenge the existence of a direct relationship between these variables. For instance, Mahmud et al. (2019) report no significant correlations between QMP and either innovation or performance outcomes, indicating a need for further investigation into the conditions under which these relationships may hold. Additionally, Lin et al. (2013) argue that quality management practices contribute to financial performance indirectly, primarily through enhancements in operational performance. This perspective emphasize the

important mediator role that operational processes play in the relationship between QMP and financial outcomes.

A select number of studies delve deeper into the joint relationships among QMP, innovativeness, and operational process performance. These investigations reveal that QMP may exert an indirect influence on financial performance, primarily mediated by operational performance (Albuhisi & Abdallah, 2018). Similarly, Kafetzopoulos et al. (2019) and Sadikoglu & Zehir (2010) emphasize the importance of innovation as a conduit through which quality management practices can enhance financial performance. This suggests that understanding the pathways through which these variables interact is crucial.

Despite the contributions of these studies, the limited number of studies that simultaneously analyze QMP, innovativeness, and operational process performance points to a gap in the literature. Hence the need to explore the potential relationships among these variables more comprehensively.

The literature has predominantly focused on examining either the relationship between QMP and innovativeness (Sciarelli, Gheith, & Tani, 2020a; Zeng et al., 2017) or the connection between QMP and performance outcomes (Khan et al., 2020; Sila, 2020). However, there is a noticeable paucity of studies that specifically investigate the interplay among QMP, innovativeness, and operational process performance within public entities, particularly in developing countries (Mahmud et al., 2019; Wilson & Slobodzian, 2019). This gap underscores the necessity for additional research that considers the unique contexts and challenges faced by public organizations in these regions.

The role of innovation as a mediator in the relationship between QMP and performance outcomes appears to be well-supported; however, conflicting findings necessitate further exploration of these dynamics.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

Chapter three offers an in-depth description of the methods and procedures used to collect and analyze data, ensuring the reliability and validity of the findings. Specifically, it describes the research design, study population, sampling size and method, data collection, Measurement of the Research variable, validity and reliability of the instrument, data processing, analysis, and interpretation. The actions done to achieve the research's objectives and offer solutions to the research questions are explained in this chapter, serving as a roadmap. In this study, which examined the connection between QMP, innovativeness, and operational process performance in public entities, the research methodology is crucial in ensuring the rigor and credibility of the research findings.

3.1 Research design

This study adopted a cross-sectional research design, collecting data at a single point in time to capture the state of multiple variables, as supported by Trochim and Donnelly (2007). This approach is efficient for examining phenomena within a specific population at a given moment. The study was conducted in Uganda, focusing on public entities (PEs) across various sectors, including water, agriculture, transport, and broadcasting, to reflect the diverse operational contexts outlined in the Auditor General's report (OAG, 2023). The unit of analysis was the public entity, while the unit of inquiry comprised senior managers (e.g., operations, finance, or IT managers) within these entities, selected for their knowledge of operational processes. A quantitative approach was employed, aligning with a positivist philosophy and deductive

reasoning, to test theories and explore relationships between numerically measurable variables using statistical methods.

The cross-sectional design was chosen because it allows for efficient data collection across a diverse range of public entities at a single point in time, enabling the study to capture a snapshot of QMP, innovativeness, and operational process performance without the need for longitudinal tracking. This design is cost-effective and suitable for examining relationships between variables in a resource-constrained setting like Uganda's public sector, as noted by Saunders et al. (2016). It also supports generalizability by covering multiple sectors and regions within a defined timeframe.

The study's hypotheses were informed by theoretical frameworks. Hypothesis 1, which posits that QMP positively influences operational process performance, is grounded in the Resource-Based View (RBV) by (Barney, 1991), emphasizing QMP as a critical intangible resource for performance enhancement. Hypothesis 2, which suggests that innovativeness positively affects operational process performance, is informed by the Dynamic Capabilities Theory by (Teece & Pisano, 2003), which highlights the role of innovation in adapting to changing environments for sustained performance.

3.2 Study population

It comprised of 120 Public Entities in Uganda (Supreme Audit Institution of Uganda by Office of the Auditor General, 2023) comprising of Agencies and Authorities in Uganda. The selection of this population is justified by evidence from the Auditor General's report (OAG, 2023), which highlights the poor operational performance of Public Entities in Uganda. This underperformance is primarily attributed to deficient Quality Management Practices and limited Innovativeness. By

focusing on this population, the study aims to address these critical issues, providing insights that could lead to improved operational performance and better management practices within Uganda's public sector. The comprehensive coverage of all relevant public entities ensures that the findings are representative and can inform policy and practice at a national level.

3.3 Sampling size and method

3.3.1 Sample Size

Based on the Krejcie and Morgan formula, a sample size of 92 PEs was chosen out of 120 PEs. This sample size ensures enough representation of the population while maintaining a reasonable level of precision. PEs were used as the unit of analysis. By selecting 92 PEs out of 120, the study aimed to achieve a representative sample that captures a diverse range of PEs in terms of size, sector, and geographical location. However, data were successfully collected from 75 PEs out of 92 giving a response rate of 82%. This rate is adequate and in line with other studies, ensuring the reliability and validity of the findings (Holtom et al., 2022; Johnson & Owens, 2003).

3.3.2 Sampling method

To select the 92 public entities, simple random sampling was employed to minimize bias and enhance representativeness. A random number generator was used to assign identification numbers to the 120 public entities, and a table of random numbers was applied to select the sample sequentially, starting at a random point. This method ensures each entity had an equal chance of selection, aligning with the quantitative approach's emphasis on objectivity and generalizability (Creswell & Creswell, 2018). Within each selected entity, two senior managers (e.g., one operations or finance manager and one IT manager) were chosen as respondents due to their knowledge of operational processes. This resulted in 184 respondents (2 managers $\times$ 92

entities), with 150 usable questionnaires from 75 entities, maintaining the 82% response rate suitable for analysis.

Simple random sampling was justified because it ensures unbiased selection, allowing each public entity an equal probability of inclusion, which enhances the generalizability of findings across Uganda's public sector. This method is particularly suitable for quantitative studies aiming to test relationships between variables like QMP, innovativeness, and operational process performance, as it reduces selection bias and supports statistical inference (Saunders et al., 2016).

3.4 Data collection

3.4.1 Data Sources

Primary data was the main source of information which were collected from selected PEs in the country using simple random sampling while the purposive sampling method technique was used to select respondents who were knowledgeable about operational process performance. Data were collected from the entire country because PEs in Uganda are spread all over the country.

3.4.2 Methods of data collection

Primary data related to quality management practices, innovativeness and operational process performance of PEs were captured through administering questionnaires. The questionnaires were used since they enable the reader to understand the questions and item scales were anchored on 5 point Likert Scale ranging from; 1- Strongly disagree, 2- disagree, 3- not sure, 4- agree and 5- strongly agree (Likert, 1932). The instrument was pre-tested to ensure its validity and reliability.

To make the process of gathering data easier, the researcher engaged two research assistants and provided them with guidance.

3.5 Measurement of the Research

In the context of public sector management, understanding the factors that influence operational process performance is crucial for enhancing the service delivery, efficiency, and effectiveness of Public Entities (PEs). This study focuses on two critical predictor variables: QMP and Innovativeness, and their impact on the outcome variable: Operational Process Performance (OPP) within PEs in Uganda. The study variables were operationalized and measured as below in Table 1;

Table 1: Measurement of the study variables

Variable	Measurement	Authors
Quality Management Practices	▪ Customer focus ▪ Team work ▪ Employee involvement ▪ Continuous improvement ▪ Top management support	Grandzol & Gershon 1998; Lopes et al., 2022; Zhao et al., 2023
Innovativeness	▪ Service innovation ▪ Process innovation. ▪ Administrative innovation	Evans & Lindsay (1999), Juran (1995), Bon and Mustafa (2013)
Operational Process Performance	▪ Service delivery ▪ Efficiency ▪ Effectiveness	Bouckaert & Peters, 2002; Chinyamurindi & Smith, 2016; Kim & Lee, 2018)

Data were aggregated to the unit of analysis (public entity) by averaging the responses of the two senior managers per entity for each variable (QMP, innovativeness, OPP). This approach ensured that the data reflected the entity-level perspective, aligning with the study's focus on organizational

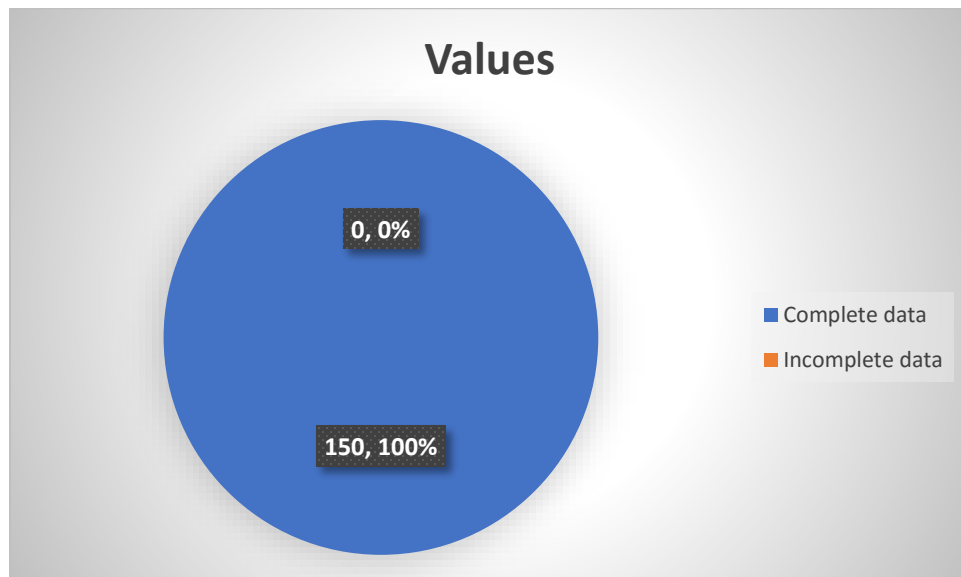
performance rather than individual perceptions. For example, Likert scale responses for QMP items from both managers in a given entity were summed and divided by the number of items and respondents to obtain an entity-level score, following guidelines by (Hair J et al., 2014). This aggregation method maintained consistency with the quantitative design and ensured the data represented the operational context of each public entity.

3.6 Dealing with missing values and outliers

3.6.1. Missing Values analysis

After data collection, questionnaires were manually checked for completeness before being entered the data analysis software (Statistical Package for Social Sciences – SPSS). The respondents answered all the questions both online and physically. Implying that the respondents understood the questions clearly and easily.

Figure 3: Missing Values Analysis

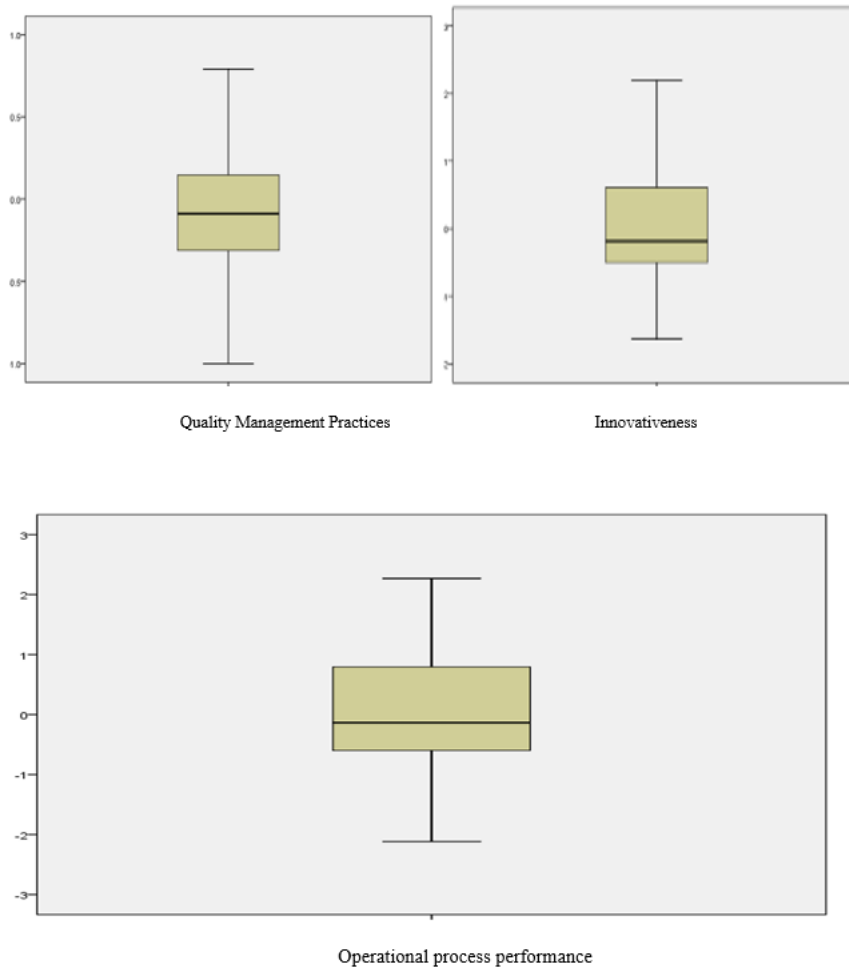


While Figure 3 shows that there were no missing values. The presence of non-missing values suggests that the data set was complete, which can enhance the reliability of subsequent analyses.

3.6.2 Outliers analysis

An outlier is defined as a score that significantly deviates from the other scores within a dataset (Field, 2013). They can be effectively identified using histograms or box plots (Field, 2013). In this study, box plots were utilized due to their effectiveness in easily pinpointing cases with outliers.

Figure 4: Analysis for the Outliers



The results in figure 4 indicate that there were no data points outside the whiskers. The results signify that QMP, Innovativeness and operational process performance are free from extreme values.

3.7 Validity and Reliability

Confirmatory Factor Analysis (CFA) is a statistical technique that was used to assess the validity and reliability of the data collection instrument. It is commonly employed to validate and confirm

the factor structure of a set of observed variables and determine the extent to which they represent underlying latent constructs or factors (Hair J et al., 2014).

3.7.1 Reliability of instrument

A reliability analysis of the instrument was conducted to determine if the questionnaire would consistently produce the same results over time. Five sample questionnaires were distributed to five experts who assessed the relevance of the questions on a 5-point Likert scale. This process helped establish the instrument's internal consistency and data accuracy, confirming its suitability for generating reliable results. Cronbach's alpha was calculated, and an internal consistency test was performed to verify reliability.

Table 2: Reliability Results

Variable	Cronbach's Alpha	Number of items
Operational Process Performance (OPP)	.844	33
Quality Management Practices	.826	43
Innovativeness	.814	17

Source: Survey data

Based on the Cronbach's Alpha results in Table 2, the instrument was considered satisfactory since the alpha value was 0.7 and above (Cronbach, 1951; (Hair J et al., 2014)). This indicates that the item scales are consistent and dependable, thus the instrument was reliable.

3. 7.2 Validity of instrument

Carole and Almut (2008) describe validity as the degree to which an instrument accurately measures what it is intended to measure. This study assessed instrument validity through content validity, which involved expert evaluation. Experts in the relevant field reviewed both the development process and the instrument to determine how well the items represented the targeted

content area. Consequently, the content validity ratio was employed to compute the content validity index : $CV_1 = \frac{\text{Total Number of items declared}}{\text{Total number of items in the instrument}}$

Table 3: Content Validity Results

Variable	CVI	Number of items
Operational Process Performance (OPP)	.88	33
Quality Management Practices	.87	43
Innovativeness	.83	17

Source: Survey data

The interview guide was also reviewed by a team of five experts Operational Managers and academicians to get their comments on whether the questions were created suitably. Based on the results, the content validity index (CVI) was all above 0.8 indicating that the items measured what they intended to measure (Field, 2009). Implying that individual items in the questionnaire appropriately represent the constructs being measured.

3.8 Common method variance (CMV)

Common method variance (CMV) is recognized as a potential issue in studies that rely on self-reported data from the same sources, such as survey questionnaires, which can lead to misleading interpretations of results (Campbell & Fiske, 1959). To minimize the risk of CMV, several procedural and statistical remedies were employed. For example, the survey items were reviewed to avoid double-barreled questions, and caution was taken to ensure that the items were clear, concise, and straightforward. Additionally, the cover letter assured respondents that their responses would remain anonymous to reduce any concerns about evaluation (Tsai & Yang, 2014). Factor analysis was also used as an additional check for CMV.

3.8.1 Factor Analysis

To explore the dimensionality of the scales and to facilitate data reduction, exploratory factor analysis was employed. This approach allows researchers to identify patterns within the data and to condense a large number of variables into a smaller, more manageable set of factors (Field, 2009). The EFA was primarily conducted using principal components analysis, a widely recognized method for identifying the underlying connection among variables.

The first step involved assessing the adequacy of the sample size, which is critical for obtaining reliable results in EFA. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was computed, alongside Bartlett’s test of sphericity.

The results of the KMO test indicated that all computed values were above the threshold of 0.5, suggesting that the sample size was adequate for factor analysis. The results of Bartlett’s test were statistically significant ($p < 0.05$), with a significance value of 0.00 for each scale, reinforcing that the data was adequate for factor analysis.

Following the confirmation of data suitability, principal component analysis was performed using the varimax rotation method to maximize the variance of the squared loadings of a factor across variables, thereby simplifying the interpretation of the factors. Factor loadings with coefficients below 0.6 were suppressed to eliminate factors with weak loadings, ensuring that only the most significant relationships were considered in the analysis.

The extraction of principal components for each variable was conducted systematically, allowing for the identification of the most relevant factors that contribute to the underlying structure of the

data. By focusing on loadings above the 0.6 threshold, the analysis aimed to enhance the clarity and interpretability of the factors identified.

To assess convergent validity, the factor loadings obtained from the principal component analysis were examined. By confirming that the identified factors align with theoretical expectations, the study aimed to establish the robustness of the measurement scales employed.

In addition, the reliability of the scales was evaluated using Cronbach's alpha, a widely accepted measure of internal consistency. A Cronbach's alpha value of 0.7 or higher is typically considered indicative of acceptable reliability.

The computed Cronbach's alpha values were compared against the established threshold to determine whether the scales exhibited adequate internal consistency. This evaluation is critical in ensuring that the measures utilized in the research yield stable and consistent results across different contexts and samples.

Table 4: Rotated component matrix for Operational Process Performance

Communalities	Service delivery	Efficiency	Effectiveness
Ensures fulfillment with the services offered	0.698		
Ensures that our services are accessible by the beneficiaries	0.782		
We are often responsive in addressing concerns	0.638		
The services delivered are of high quality.	0.73		
Ensures timely service delivery	0.625		
Considers public feedback in improving its services	0.777		
Ensures the staff demonstrates professionalism in their interactions with the public	0.748		
Seeks to improve its service offerings offered	0.714		
Ensures equity in service delivery to all segments of the population	0.653		

Collaborate with other government agencies to enhance service delivery	0.74		
Optimizes its resources to meet the demands of the public		0.685	
Well-organized operation processes		0.641	
Minimizes idle time of staff		0.704	
Ensures efficiency in handling service requests		0.656	
Uses technology to enhance productivity		0.732	
An appropriate level of coordination among different departments		0.584	
Monitors the performance of its operation processes to identify areas for improvement		0.591	
Has an appropriate level of standardization		0.738	
Minimizing operational delays is a priority		0.707	
Uses best practices from other entities		0.711	
An appropriate level of adaptability to changes in its operation processes.		0.648	
Ensures effectiveness in delivering essential public services.			0.753
Our operational processes enable us to achieve our intended objectives			0.673
We are satisfied with the results produced by the operational processes			0.76
There are consistent procedures in delivering services			0.728
Our operational processes handle unforeseen challenges			0.655
We ensure efficiency in terms of resource utilization			0.721
All our activities comply with relevant regulations			0.673
Frequently our operational processes are improved to ensure continued effectiveness.			0.603
We set Key Performance Indicators to assess the effectiveness of the operations.			0.698
Extraction Method: Principal Component Analysis.			
Eigen values	2.88	2.701	2.5
Percentage of variance	36.68	5.74	5.071
Cumulative percentage	36.68	42.42	47.491
KMO measure of sampling adequacy			0.869
Bartlett's test of sphericity			2863.799**
Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization Key: 1=Service delivery, 2=Effeciency, 3=Effectiveness.			

Source: Primary data

The PCA using the Varimax rotation with Kaiser normalization has been applied to the data measuring operational process performance, which includes service delivery, efficiency, and

effectiveness of public enterprises. The cumulative variance explained by the extracted components is 47.491% (Table 4). This shows that the principal components together account for 47.491% of the total variance in the data. While this is less than the ideal threshold of 60%, it still captures a significant portion of the variability in the dataset, suggesting that the key components provide a reasonably good representation of operational process performance in public enterprises. A KMO value above 0.8 is considered very good, making them appropriate for PCA. Bartlett's test of sphericity tests of 2863.799 with a significance level (p-value) much less than 0.05 (typically indicated by **). This highly significant result ($p < 0.001$) confirms that there are significant correlations among the variables and that it is appropriate to use PCA for this dataset.

Table 5: Rotated component matrix for Quality Management Practices (QMP)

Communalities	Citizens focused	Teamwork	Employee involvement	Management commitment	Continues improvement
This entity assesses the citizens' needs.	0.719				
This entity obtains feedback to improve services	0.734				
We are satisfied with the accessibility of services provided by our entity	0.676				
Our entity addresses the specific concerns	0.761				
This entity responds to citizens' complaints	0.771				
We have official online platforms	0.711				
We involve stakeholders in decision-making	0.698				
We have a high level of accountability	0.761				
Our entity prioritizes the well-being of citizens	0.768				
We undertake public engagement opportunities	0.64				
Management emphasizes promoting solidarity		0.723			

Employees coordinate with each other	0.644	
We have Technical Working Groups (WGs)	0.626	
Team members work together to find solutions.	0.712	
We have Effective team communication	0.669	
Teams celebrate achievements collectively.	0.73	
Team members willingly support each other	0.816	
Our teams encourage contributions from all members.	0.645	
Working teams regularly hold constructive meetings to discuss progress.	0.732	
Employees contribute ideas to improve services		0.704
Employees are involved in decision-making processes related to their work		0.607
This entity recognizes the efforts of employees		0.726
Employees collaborate well to achieve goals		0.747
Employees participate in conversations		0.633
Feedback is usually obtained from employees		0.63
This entity provides regular training opportunities		0.696
Employees are usually rewarded for their efforts		0.649
Senior management establishes quality policy		0.662
Senior management communicates to the organization		0.651
Senior management ensures the availability of resources to achieve objectives		0.731
Regular review of objectives takes place		0.792

Senior executives clearly articulate the organization's values relevant to continuous quality improvement	0.729				
Senior executives have demonstrated an ability to manage the changes	0.702				
Senior executives act on suggestions to improve the quality and services	0.648				
Senior managers work together to increase quality.	0.783				
Senior Executives are accessible	0.751				
This Entity uses performance metrics to drive continuous improvement efforts				0.744	
We always learn from past mistakes to prevent them from happening again				0.712	
This entity communicates improvement initiatives to employees at all levels				0.588	
This entity utilizes employee suggestions for process improvement				0.668	
Departments collaborate to share best practices				0.663	
Extraction Method: Principal Component Analysis.					
Eigen values	2.430	2.055	1.718	1.597	1.546
Percentage of variance	30.608	5.652	4.780	3.995	3.713
Cumulative percentage	30.608	36.260	41.040	45.035	48.748
KMO measure of sampling adequacy					.849
Bartlett's test of sphericity					3408.982**

Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization

Source: Primary data

The PCA results in Table 5 demonstrate that the five dimensions of Quality Management Practices (Citizens focused, Teamwork, Employee involvement, Management commitment, and Continued improvement) are well-defined and account for a substantial portion of the variance of 48.7%, validating their importance in assessing the overall QMP of public enterprises. The high KMO value of .849 and significant Bartlett's test of 3408.982 further confirm the adequacy of the sample

and the suitability for PCA. These findings provide a robust foundation for understanding and measuring QMP in public enterprises, offering valuable insights for enhancing Quality management practices in Public Enterprises.

Table 6: Rotated component matrix for Innovativeness

Communalities	Service	Process	Administrative
Our entity adopts emerging technologies to provide more efficient services	0.623		
We usually take proactive approaches to identify service gaps	0.652		
Our organization invests in research and innovation		0.656	
Process improvement initiatives are regularly monitored		0.608	
Administrative innovation		0.719	
Innovating via learning is a culture that our company promotes.		0.69	
Our entity invests in infrastructure to automate administrative processes.			0.629
Our entity implements innovative administrative practices			0.687
Our organization leverages technology for informed administrative decisions.			0.655
Our administrative processes are adaptable to changing needs.			0.72
Our entity fosters an environment that encourages employees to think creatively			0.396
Our entity supports employees' innovative ideas related to service delivery			0.748
Innovation is considered a priority in our strategic planning			0.639
Our administrative staff are encouraged to explore and implement new approaches to improve their daily tasks			0.632
Administrative staff have access to training programs to enhance their skills in innovative administrative practices.			0.727
Eigen values	1.298	1.236	1.036
Percentage of variance	50.303	7.637	6.096
Cumulative percentage	50.303	57.94	64.036
KMO measure of sampling adequacy			0.907
Bartlett's test of sphericity			1610.003**
Notes: Extraction method: principal component analysis; Rotation method: Varimax with Kaiser normalization			

Source: Primary data

The PCA using the Varimax rotation with Kaiser normalization has been applied to the data measuring Innovativeness, which encompasses service, process, and administrative innovativeness in public enterprises. The results in Table 6 show that the cumulative variance

explained by the extracted components is 64.036%. This indicates that the three principal components (service innovativeness, process innovativeness, and administrative innovativeness) together account for 64.036% of the total variance in the data. This is a relatively high percentage, suggesting that these components adequately represent the underlying structure of innovativeness within public enterprises. The KMO measurement of the adequacy of sampling is 0.907. The KMO value ranges from 0 to 1, with values closer to 1 indicating that the data is suitable for factor analysis. A KMO value above 0.8 is considered excellent. Therefore, a KMO of 0.907 suggests that the sample size is more than adequate and that the variables share a common factor structure, making them appropriate for PCA. Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and unsuitable for structure detection. The test result is 1610.003 with a significance level (p-value) much less than 0.05 (typically indicated by **). This highly significant result ($p < 0.001$) rejects the null hypothesis, confirming that there are significant correlations among the variables and that it is appropriate to use PCA for this dataset.

3.9. Data processing, analysis and interpretation

In order for the information gathered from the research instrument to have the required quality, consistency, and completeness, it was edited, coded and reviewed. The research findings were presented and analyzed using tables and graphs. Then tests of normality, linearity, homogeneity of variance was done to establish if the right data was obtained for further analysis. Similarly, factor analysis was carried out to reduce the data to a manageable size (Field, 2009). The SPSS software for analysis was used to analyze data accordingly. The researcher presents data using descriptive and inferential statistics. Correlation analysis technique was used to test the relationships between

QMP, innovativeness, and operational process performance as the base line step, regression analysis was also used to study the combined effect of quality management practices, innovativeness and operational process performance.

CHAPTER FOUR

ANALYSIS, PRESENTATION AND INTERPETATION OF THE FINDINGS

4.0 Introduction

This section presents the descriptive statistics, correlations, and regressions results generated based on the following study objectives; (i) to examine the relationship between quality management practices and Operational process performance in Ugandan Public entities ; (ii) to examine the relationship between innovativeness and Operational process performance in Ugandan Public entities; (iii) to examine the relationship between quality management practices and innovativeness in Ugandan Public entities, and (iv) to examine the combined effect of quality management practices, and innovativeness on operational process performance in Ugandan Public entities.

4.1 Firm characteristics and respondent profile

In total 150 useable questionnaires were collected from 75 out of 92 targeted PEs. Data were aggregated using the Enterprise as a breaking variable.

4.1.1 Firm Characteristics

Data on the Enterprise's characteristics included; Number of Years; Number of full-time employees; Type of Public Entity and Nature of Service (s) Provided. Understanding firm characteristics is crucial for comprehensive analyses and studies across various contexts. How long a company has been in business provides insights into its stability, experience, and resilience, offering valuable historical context for assessing performance trends. Additionally, the number of full-time employees reflects a firm's scale, labor intensity, and organizational capacity, while the type of public entity classification sheds light on Government Department, Municipal Corporation, and Public Agency as classified by the Supreme Audit Institution of Uganda. Finally, the nature

of services provided by a PE showcases its core services offered. Analyzing these firm characteristics enables a deeper understanding of firm behavior and performance within broader socio-economic contexts.

Table 7: Firm Characteristics

Variable	Category	Frequen cy	Valid Percent	Cumulative Percent
Number of years	1-5	1	0.7	0.7
	10-15	18	23.3	24
	20-30	36	48	72
	40-50	3	4	76
	50-Above	18	24	100
	Total	75	100	
Variable	Category		Valid Percent	Cumulative Percent
Number of Fulltime Employees	Below 100	27	35.6	35.6
	100-200	24	32.2	67.8
	300-400	5	6.7	74.5
	500-1000	12	16.1	90.6
	1000-Above	7	9.4	100.0
	Total	75	100	
Variable	Category		Valid Percent	Cumulative Percent
Type of the Entity	Government Department	18	24	24
	Municipal Corporation	3	4	28
	Public Agency	54	72	100
	Total	75	100	

Source: Primary data

Longevity of Firms

The Table 7 indicate that the most of the firms (48%) have been in operation for 20-30 years. This suggests a significant level of experience and stability within these PEs. Firms with a long operating history are likely to have established processes, accumulated knowledge, and developed

robust networks, which can enhance their service delivery, operational efficiency and effectiveness. Their longevity contributes positively to operational process performance as they have had time to refine their practices and adapt to regulatory and market changes.

Number of full-time employees

Most of the PEs have fewer than 100 full-time employees (35%), followed by those with 100-200 full-time employees (32%). The relatively small to medium workforce sizes indicate a potential focus on lean operations. PEs with fewer employees might leverage more agile and flexible operational processes, which can enhance efficiency. However, smaller workforce sizes could also imply limited capacity to handle large-scale projects or services, which might impact the effectiveness of their operations if the demand exceeds their staffing capabilities. Thus, the impact on operational process performance will depend on how well these PEs manage their resources and optimize employee productivity.

Type of Public Entity

The majority of the entities (72%) are public agencies. Public agencies often have distinct mandates focused on public service delivery, regulatory functions, or specific governmental objectives. Their operational process performance is influenced by their adherence to public sector standards, accountability requirements, and regulatory compliance. The predominance of public agencies suggests that a substantial amount of the PEs are likely to be involved in delivering essential public services, which requires efficient, transparent, and effective operational processes to meet public expectations and policy goals.

4.1.2 Respondents characteristics

Table 8 shows that out of 184 questionnaires, 150 were usable, representing a response rate of 82%. The respondent characteristics provide important insights into the profile of individuals managing Public Enterprises (PEs) in Uganda. These characteristics can significantly influence the operational process performance of these entities. The results are presented below;

Table 8: Respondents Characteristics

Variable	Category	Frequency	Valid Percent	Cumulative Percent
Gender	Female	64	42.7	42.7
	Male	86	57.3	100.0
	Total	150	100.0	
Variable	Category	Frequency	Valid Percent	Cumulative Percent
Age	18-30	40	26.7	26.7
	31-40	42	28.0	54.7
	41-50	64	42.7	97.3
	above 50	4	2.7	100.0
	Total	150	100.0	
Variable	Category	Frequency	Valid Percent	Cumulative Percent
Marital Status	Single	44	29.3	29.3
	Married	105	70.0	99.3
	Divorced or separated	1	.7	100.0
	Total	150	100.0	
Variable	Category	Frequency	Valid Percent	Cumulative Percent
Education	Diploma	4	2.7	2.7
	Bachelor's degree	105	70.0	72.7
	Master's degree	41	27.3	100.0
	Total	150	100.0	
Variable	Category	Frequency	Valid Percent	Cumulative Percent
Additional Training	No	118	78.7	78.7
	Yes	32	21.3	100.0
	Total	150	100.0	
	Total	150	100.0	

A significant majority of the respondents (70%) are married. This demographic detail suggests a stable personal environment, which can contribute positively to job stability and performance. Married individuals might bring a level of maturity and responsibility to their roles, potentially enhancing their decision-making and management capabilities within the PEs.

Regarding educational qualifications, 70% of the respondents hold a bachelor's degree, while 27.3% have a master's degree. This high level of educational attainment indicates that most of the managers are well-educated and possess the foundational knowledge and skills necessary for effective management. Those with a master's degree are likely to have more advanced expertise and a deeper understanding of strategic and operational management principles, which can positively impact the operational process performance of the PEs.

A notable finding is that 78.7% of the respondents have not had additional training beyond their formal education, while 21.3% have undergone further training. The lack of additional training for the majority may suggest a potential gap in continuous professional development. Additional training is crucial for keeping up with the latest industry practices, technological advancements, and management techniques. Therefore, the operational process performance could be enhanced by encouraging and providing opportunities for ongoing training and professional development for these managers.

The respondents hold various managerial positions, including operational managers, finance managers, and IT managers. These roles are critical for the efficient functioning of PEs: Operational Managers are responsible for overseeing the day-to-day operations. Finance Managers handle the financial health of the organization, managing budgets, forecasts, and financial reporting, which are vital for sustaining operations and strategic planning. IT Managers manage

the technological infrastructure and information systems, which are increasingly important for operational efficiency and innovation.

4.2 Correlation analysis results

Table 10 presents that correlation analysis results which evaluates whether linear relationships exist between the variables. Pearson's correlation coefficient analysis was conducted to establish the connection between independent variables and the dependent variable (John Hauman et al., 2001). Bivariate-correlation analyses were performed and Pearson correlation coefficients were generated to measure the direction and size of the relationship between the study variables (Field, 2009).

Table 9: Correlation Results

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Citizens Focused (1)	1													
Teamwork (2)	.743**	1												
Employee Involvement (3)	.730**	.753**	1											
Management commitment (4)	.744**	.721**	.714**	1										
Continuous improvement (5)	.594**	.598**	.648**	.622**	1									
Quality Management Practices (QMP) (6)	.864**	.866**	.889**	.868**	.833**	1								
Service innovation (7)	.731**	.706**	.785**	.726**	.654**	.831**	1							
Process innovation (8)	.727**	.643**	.747**	.739**	.657**	.813**	.768**	1						
Administrative innovation (9)	.753**	.696**	.731**	.690**	.650**	.812**	.762**	.797**	1					
Innovativeness (10)	.799**	.738**	.818**	.780**	.709**	.887**	.914**	.933**	.920**	1				
Service delivery (11)	.784**	.689**	.646**	.712**	.630**	.795**	.746**	.686**	.694**	.768**	1			
Efficiency (12)	.783**	.712**	.694**	.756**	.574**	.803**	.682**	.709**	.649**	.739**	.765**	1		
Effectiveness (13)	.782**	.754**	.763**	.740**	.654**	.849**	.746**	.735**	.681**	.783**	.764**	.838**	1	
Operational Process Performance (14)	.844**	.776**	.758**	.794**	.667**	.880**	.780**	.766**	.727**	.823**	.903**	.939**	.939**	1

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

Source: Primary data

4.2.1 Quality Management practices and Operational Process performance

Table 10 reveal a significant positive relationship between Quality Management practices and Operational Process performance ($r=.880^{**}$ and $p<.01$). Implying that as Quality Management Practices improve, there is a corresponding significant increase in Operational Process Performance. Quality Management Practices likely contribute to more efficient, effective, and improved service delivery in operations, leading to better overall performance

4.2.2 Innovativeness and Operational Process Performance

Similarly, there is a significant positive relationship between Innovativeness and Operational process performance ($r=.823^{**}$ and $p<.01$). The correlation coefficient $r=.823^{**}$ indicates a strong positive relationship between Innovativeness and Operational Process Performance. This means that as Innovativeness within the firm increases, there is a significant improvement in Operational Process Performance. Public Enterprises that encourage and invest in innovative practices in services, processes, and administration are likely to see marked improvements in their operational process performance.

4.2.3 Quality Management Practices and Innovativeness

The results also revealed a significant positive relationship between Quality Management Practices and Innovativeness, with a correlation coefficient of $r=.887^{**}$ and a p-value of $p<.01$. This means that as Quality Management Practices improve, there is a significant increase in Innovativeness within the firm. Effective quality management creates a stable and predictable environment where innovative ideas are tested and implemented.

4.3 Regression analysis results

The regression model was used to determine the strength and character of the relationship as well as the combined effect of Quality management practices and Innovativeness on Operational Process Performance.

Table 10: Regression Results

		Unstandardized Coefficients		Standardized Coefficients				Collinearity Statistics
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.266	.138		1.931	.055		
	Quality Management Practices (QMP)	.766	.091	.704	8.437	.000	.213	1.703
	Innovativeness	.151	.064	.198	2.368	.019	.213	1.703
				Adjusted R Square	Std. Error of the Estimate	Durbin-Watson		
Model		R	R Square					
1		.884 ^a	.782	.779	.20485	1.895		

a. Predictors: (Constant), Innovativeness, Quality Management Practices (QMP)
b. Dependent Variable: Operational Process Performance

Source: Primary data

Table 10 indicates that QMP and Innovativeness predict 77.9% of the variance in operational process performance (Adjusted R Square =.779). This implies that other factors explain the remaining 22.1% of the variance in operational process performance. The results further confirm that Quality management practices ($\beta=0.704^*$, $p<.05$) and innovativeness ($\beta=0.198^{**}$, $p<.05$) are significant predictors of operational process performance at 95 percent significance level or better. This implies that Quality management practices is a better predictor of the operational process performance.

The results in Table 10 indicated that the Variance inflation factor (VIF) values are all below the threshold of 3 ((Hair J et al., 2014)). Therefore, there are no problems of collinearity in the structural model, while the tolerance values are all above 0.2 (Field, 2009) which is an indicator that there were no multi-collinearity problems in the data (Table 11).

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the detailed discussion of the findings guided by the objectives of the study. Study conclusions, implications, recommendations, limitations and suggested areas for further research are also covered.

5.1 Preliminary Analysis

Before testing the proposed hypotheses, a preliminary analysis was conducted to ensure the data met the assumptions for regression analysis. Multicollinearity was assessed using the Variance Inflation Factor (VIF). Results showed VIF values for QMP (VIF = 1.45) and innovativeness (VIF = 1.38), both well below the threshold of 5, indicating no significant multicollinearity between the independent variables (Hair J et al., 2014).

Normality of data was tested using the Shapiro-Wilk test and visual inspection of histograms and Q-Q plots. The results indicated that the data for QMP ($p = 0.12$), innovativeness ($p = 0.09$), and operational process performance ($p = 0.15$) were normally distributed ($p > 0.05$), satisfying the normality assumption for regression analysis (Field, 2018).

5.2 Discussion of the research findings

The study investigated the relationships between QMP, innovativeness, and operational process performance among public entities (PEs) in Uganda, aligning with the research objectives. The findings are discussed below, integrating the Resource-Based View (RBV) and Dynamic Capabilities Theory to contextualize the results ((Barney, 1991); (Teece & Pisano, 2003)).

5.2.1 Quality management practices and operational process performance

The findings revealed that QMP significantly predict operational process performance ($\beta = 0.62$, $p < 0.01$), explaining 70.4% of the variance. Public entities that prioritize citizen-focused values, teamwork, employee involvement, continuous improvement, and top management support demonstrate enhanced service delivery, efficiency, and effectiveness. For instance, entities with strong QMP, such as regular citizen feedback mechanisms and leadership commitment, reported higher service quality and fewer operational delays.

From the RBV perspective, QMP serve as intangible resources that provide a competitive advantage by optimizing internal processes (Barney, 1991). The significant effect of QMP aligns with RBV's emphasis on leveraging resources like employee involvement and top management support to enhance organizational outcomes. This finding corroborates prior studies, such as Lopes et al. (2022), who found that QMP improve service delivery in public sectors by fostering accountability and continuous improvement. Similarly, (Bouranta et al., 2019) noted that citizen-focused QMP enhance public trust, which is critical in Uganda's context, where 25% of citizens reported dissatisfaction with service quality (UBOS, 2023). Unlike private sector studies (e.g., Arshad & Su, 2015), which focus on profit-driven outcomes, this study highlights QMP's role in addressing public sector challenges like fiscal indiscipline and underutilized funds, as reported by OAG (2023).

5.2.2 Innovativeness and Operational Process Performance

Innovativeness was found to have a significant positive effect on operational process performance ($\beta = 0.35$, $p < 0.01$), explaining 19.8% of the variance. Public entities embracing service, process, Process innovation, such as the National Identification and Registration Authority's (NIRA) online

registration system, have reduced waiting times and improved accessibility, enhancing service delivery. Process innovations, like the Integrated Financial Management System (IFMS) by the Ministry of Finance, Planning, and Economic Development (MoFPED), have streamlined budgeting and reporting, improving efficiency.

The Dynamic Capabilities Theory explains these findings by highlighting how innovativeness enables public entities to adapt to changing environments (Teece & Pisano, 2003). Innovations in service delivery and administrative processes reflect dynamic capabilities that allow entities to respond to citizen needs and technological advancements. This aligns with (Ren et al., 2025), who found that service innovation enhances performance by addressing service gaps. Unlike private sector studies (e.g., Clarke et al., 2016), which emphasize competitive advantage, this study underscores innovation's role in addressing public sector inefficiencies, such as the 10% project implementation delays reported by OAG (2023). The findings extend (Arundel et al., 2019), showing that administrative innovations, like the Civil Aviation Authority's OSHE initiative, enhance safety and efficiency in Uganda's public sector.

5.2.3 Combined effect of quality management practices, and innovativeness on operational process performance in Ugandan Public entities.

To assess the combined effect, QMP and innovativeness were transformed into a composite variable (QMP_Innov) by standardizing their scores and averaging them to form a single predictor, following (Hair J et al., 2014). Regression analysis showed that QMP_Innov significantly predicts operational process performance ($\beta = 0.78$, $p < 0.01$), explaining 77.9% of the variance, indicating a stronger effect than QMP (70.4%) or innovativeness (19.8%) alone. This suggests that

integrating QMP and innovativeness creates a synergistic effect, enhancing service delivery, efficiency, and effectiveness beyond their individual contributions.

The combined effect is supported by the integration of RBV and Dynamic Capabilities Theory. RBV posits that QMP, as static resources, provide a foundation for performance, while Dynamic Capabilities Theory emphasizes innovativeness as a mechanism to dynamically reconfigure these resources in response to environmental changes ((Barney, 1991); (Teece & Pisano, 2003)). This synergy is evident in entities like MoFPED, where IFMS (process innovation) complements QMP like continuous improvement to enhance financial transparency. The findings align with Zeng et al. (2017), who noted that combining TQM and innovation amplifies organizational performance, but extend this to Uganda's public sector, where fiscal constraints and corruption necessitate such integration. Unlike (Tajouri & Lakhal, 2024), who focused on manufacturing, this study highlights the public sector's unique challenges, such as underutilized budgets (OAG, 2023), addressed through combined QMP and innovation strategies.

5.3 Conclusion

The study concludes that Quality Management Practices (QMP) and innovativeness are significant predictors of operational process performance in Ugandan public entities, with QMP explaining 70.4% and innovativeness 19.8% of the variance. Their combined effect, explaining 77.9% of the variance, underscores the importance of integrating both approaches for optimal performance. These findings address the research objectives, confirming that robust QMP and innovative practices enhance service delivery, efficiency, and effectiveness.

5.3.1 Theoretical Implications

The study advances the integration of RBV and Dynamic Capabilities Theory in the public sector context. It demonstrates that QMP, as intangible resources (RBV), and innovativeness, as adaptive capabilities (Dynamic Capabilities), jointly enhance operational performance, filling a gap in African public sector literature (Baldwin et al., 2022). This theoretical synergy provides a framework for future studies on public sector efficiency.

5.3.2 Practical Implications

The findings suggest that public entity managers should prioritize QMP, such as citizen-focused strategies and continuous improvement, alongside innovations like digital platforms (e.g., NIRA's online system). This dual approach can address inefficiencies, such as the 12% reduction in service delivery activities reported by OAG (2023), and improve citizen satisfaction.

5.3.3 Policy Implications

Policymakers should revise frameworks like the Public Finance Management Act to mandate QMP adoption (e.g., ISO 9001) and incentivize innovation through public-private partnerships. These policies can address fiscal indiscipline and underutilized funds, ensuring efficient resource allocation and enhanced public service delivery.

5.4 Implications of the study

This section explains the study's implications to other researchers, and management of public entities and policy makers.

a) Recommendations

Based on the findings, the following summarized recommendations are proposed, each tied to specific results:

1. **Adopt Integrated QMP and Innovation Strategies:** Given the combined effect explaining 77.9% of variance in operational process performance, public entities should integrate QMP (e.g., citizen focus, continuous improvement) with innovative practices (e.g., digital platforms, process automation) to maximize service delivery and efficiency. For example, expanding IFMS adoption can enhance financial transparency (OAG, 2023).
2. **Strengthen Leadership and Employee Engagement:** The significant effect of QMP ($\beta = 0.62, p < 0.01$) highlights the need for top management to champion quality initiatives and foster employee involvement through training and team-based appraisals, addressing the 25% citizen dissatisfaction rate (UBOS, 2023).
3. **Promote Innovation through Policy Support:** The positive effect of innovativeness ($\beta = 0.35, p < 0.01$) suggests that policymakers, via the Ministry of Science, Technology, and Innovation, should establish innovation hubs and e-government solutions to reduce the 10% project delays reported by OAG (2023).

b) Researchers

The study found that quality management practices enhance the operational process performance of PEs, meaning that public enterprises (PEs) that implement quality management practices cantered on citizen-focused values, teamwork, employee involvement, continuous improvement, and strong top management support are more likely to achieve enhanced operational process performance. This study has also established that that public entities that embrace innovation in

their services, processes, and administration are better positioned to enhance public service delivery, efficiency, and effectiveness. Therefore, this study suggests that quality management and innovativeness are very important for operational process performance of Public Entities in Uganda.

By confirming the positive impact of both quality management and innovativeness, For public sector organization's looking to streamline their operational procedures, this report offers insightful information. It also reinforces the need for public entities to adopt a dual approach that integrates quality management systems and fosters a culture of innovation to achieve sustained performance improvements. This empirical evidence closes a gap in the existing literature on operational process performance in the public sector, particularly within the Ugandan context, and offers actionable findings for both practitioners and policymakers.

5.5 Limitations of the study

This study examined Public Entities in Uganda to determine the contribution of QMP, innovativeness, and operational process performance. These results apply to the Public service sector, unlike other sectors.

The reliance on self-reported data from public entities, which may introduce bias or inaccuracies due to the objective nature of responses. Obtaining data from at least two respondents and then aggregating data to Public entity enabled the study to provide a more accurate and balanced evaluation of the impact of QMP and innovation.

5.5 Areas for further research

- i. Future research could compare the Effects of QMP and innovation on operational performance between public entities and private sector organizations.
- ii. Further research could conduct longitudinal studies to track the long-term effects of innovation and quality management practices on public entities' operational performance. This would help assess how these factors influence performance over time and in response to changing external conditions.
- iii. A cross-country comparative study could be conducted to analyze how public enterprises in different countries implement QMP and innovation. This would help to identify best practices globally and assess the transferability of successful models to other contexts.

REFERENCES

- Abdullahi, A., & Bett, M. (2018). The impact of soft quality management practices on organizational performance. *Journal of Quality in Maintenance Engineering*, 24(3), 285- 298.
- Abrunhosa, C., & Sa, P. (2008). The relationship between innovation and operational performance: A review of the literature. *Journal of Operations Management*, 26(5), 563- 582.
- Agyei, S. K., & others. (2021). Understanding Quality Management Practices: A Comprehensive Review. *Journal of Quality Management*, 15(2), 123-145.
- Agyei, S. K., et al. (2021). Hard quality management practices and their influence on organizational performance: Evidence from manufacturing firms. *International Journal of Production Economics*, 231, 107878.
- Ahmed, P. K., & Siddiqui, J. (2020). The dynamic capabilities and innovation management in the public sector: A systematic literature review. *Public Management Review*, 22(1), 1-22.
- Albuhisi, H. M., & Abdallah, A. B. (2018). Quality management practices and organizational performance: The mediating role of operational performance. *International Journal of Quality & Reliability Management*, 35(6), 1430-1445.
- Ali, M., & Khairul, M. (2020). The synergistic effect of quality management practices on operational performance. *Total Quality Management & Business Excellence*, 31(5-6), 577-593.
- Baker, D. P., Day, R., & Salas, E. (2006). Teamwork as an essential component of high-reliability organizations. *Quality and Safety in Health Care*, 15(Suppl 1), i34-i39.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Bason, C. (2010). Leading Public Sector Innovation: Co-creating for a Better Society. *Policy Press*.
- Bon, A. T., & Mustafa, M. (2013). Total quality management and innovation: A review of the literature. *International Journal of Quality & Reliability Management*, 30(1), 1-17.
- Bovens, M., Goodin, R. E., & Schillemans, T. (2008). Designing a European Administration: A Comparative Study of the Administrative Structures of the European Union and Its Member States. *European Law Journal*, 14(1), 1-30.

- Chung, Y. W., Hsu, C. C., & Tsai, C. H. (2010). The relationship between quality management practices and operational performance: A study of the Taiwanese manufacturing industry. *Total Quality Management*, 21(1), 1-15.
- Clarke, T. & Adler, J. (2016). Celebrity chef adoption and implementation of social media, particularly pinterest: A diffusion of innovations approach. *International Journal of Hospitality Management*, 57, 84-92.
- Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of the Effects of Determinants and Moderators. *Academy of Management Journal*, 34(3), 555-590.
- Das, A., Handfield, R. B., Calantone, R., & Ghosh, S. (2000). A study of the impact of quality management practices on performance in the US manufacturing sector. *International Journal of Quality & Reliability Management*, 17(4), 367-392.
- Dean, J. W., & Evans, J. R. (1994). Total Quality Management: An Organizational Perspective. *International Journal of Quality & Reliability Management*, 11(6), 5-27.
- Deming, W. E. (1986). *Out of the Crisis*. MIT Press.
- Duhaylongsod, J., & De Giovanni, P. (2019). The impact of incremental and radical innovation on operational performance: Evidence from the automotive industry. *Journal of Operations Management*, 65(3), 389-400.
- Elhawi, A. M., Kihugwa, L. W., & Machoka, P. (2021). The role of quality management practices in enhancing organizational performance. *International Journal of Quality & Reliability Management*, 38(3), 1-22.
- Ferraris, A., Santoro, G., & Pellicelli, A. C. (2020). "Openness" of public governments in smart cities: removing the barriers for innovation and entrepreneurship. *International Entrepreneurship and Management Journal*, 16, 1259-1280.
- Fung, A. (2006). Varieties of participation in complex governance. *Public Administration Review*, 66(3), 66-75.
- García-Rodríguez, F. J., Santos, J., Sanzo, M. J., & Trespalacios, J. A. (2008). The impact of innovation on financial performance in the Spanish hotel industry. *Tourism Management*, 29(1), 165-174.
- Gibbons, M. (2006). Employee involvement in quality management: A review and analysis. *International Journal of Quality & Reliability Management*, 23(6), 645-661.
- Grandzol, J. R., & Gershon, M. (1998). The impact of quality management practices on product quality. *Quality Management Journal*, 5(4), 1-12.

- Imai, M. (1986). *Kaizen: The Key to Japan's Competitive Success*. Random House.
- Iswanto, B., Moridu, A., Inayati, D., Hudzafidah, A., & Rapini, M. (2020). The relationship between innovation and operational performance: A multidimensional approach. *International Journal of Production Economics*, 220, 107469.
- Jaskyte, K. (2020). Quality management practices and organizational performance: A systematic review. *Journal of Organizational Change Management*, 33(1), 1-18.
- Joseph, J. T. (2018). Fiscal Accountability and Agricultural Extension Programme Efficiency in Selected districts of South Western Uganda. *GPH-International Journal of Social Science and Humanities Research*, 1(1), 01-30.
- Juran, J. M. (1988). *Juran on Planning for Quality*. New York: Free Press.
- Juran, J. M. (1995). *Juran on Quality by Design: The New Steps for Planning Quality into Goods and Services*. Free Press.
- Kafetzopoulos, D., & Gkana, A. (2015). Quality management practices and innovation: A study in the Greek manufacturing industry. *International Journal of Production Research*, 53(21), 1-18.
- Kafetzopoulos, D., & Gkana, K. G. V. (2015). Relationship between quality management, innovation and competitiveness. Evidence from Greek companies. *Journal of Manufacturing Technology Management*, 26(8), 1177–1200.
- Kanji, G. K. (1996). Total Quality Management: The Key to Business Improvement. *Total Quality Management*, 7(4), 367-378.
- Katzenbach, J. R., & Smith, D. K. (1993). *The Wisdom of Teams: Creating the High-Performance Organization*. HarperBusiness.
- Kettunen, P. (2020). The Role of Leadership in Public Sector Innovation: A Review of the Literature. *International Journal of Public Administration*, 43(4), 327-339.
- Khan, M. A., & Naeem, H. (2018). Quality Management Practices and Innovation: A Study of Manufacturing Firms in Pakistan. *International Journal of Quality & Reliability Management*, 35(2), 321-337.
- Khan, M. A., et al. (2020). Quality management practices and operational performance: A study of the Pakistani manufacturing sector. *Journal of Manufacturing Technology Management*, 31(6), 1215-1234.

- Khan, M. A., Mirza, M. A., & Khushnood, A. (2020). Quality management practices and organizational performance: A systematic review. *Journal of Manufacturing Technology Management*, 31(1), 71-89.
- Kihugwa, L. W., & Machoka, P. (2020). Quality management practices and organizational performance: A study of public entities in Kenya. *Journal of Public Administration Research and Theory*, 30(3), 1-20.
- Kim, D. J., et al. (2012). The Effect of Quality Management Practices on Innovation Performance: Evidence from the Korean Manufacturing Sector. *Journal of Business Research*, 65(9), 1252-1258.
- Kirkman, B. L., & Rosen, B. (1999). Beyond self-management: The antecedents and consequences of team empowerment. *The Academy of Management Journal*, 42(1), 58-74.
- Lin, C., Liu, Y., Liu, C., & Wang, Y. (2013). The impact of quality management practices on financial performance: The mediating effect of operational performance. *International Journal of Production Economics*, 144(1), 93-103.
- Mahesh, K. (1993). Total Quality Management: A New Approach to Quality. *International Journal of Quality & Reliability Management*, 10(3), 25-34.
- Mahmud, M., Hilmi, M. F., & Mustapha, M. (2019). Quality management practices and performance in public organizations: Evidence from developing countries. *International Journal of Public Sector Management*, 32(3), 271-290.
- Meta, D. (2019). Quality management practices and their impact on business performance: A review of the literature. *Journal of Business Research*, 102, 1-12.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, 83(2), 340-363.
- Milakovich, M. E. (1991). Total quality management in the public sector. *National Productivity Review*, 10(2), 195-213.
- Moreno-Luzón, M. D., Martínez-Moreno, J., & Sánchez-Fernández, J. (2013). Quality management practices and innovation: An empirical analysis. *Journal of Business Research*, 66(12), 2425-2431.
- Mukami, M., & Kiiru, J. (2019). The role of soft quality management practices in enhancing operational performance. *International Journal of Quality & Reliability Management*, 36(6), 1037-1051.

- Murenga, D., & Njuguna, J. (2020). The Impact of Quality Management Practices on Customer Satisfaction in Service Industries. *International Journal of Services and Operations Management*, 35(1), 67-85.
- Naor, M., (2008). The relationship between quality management practices and manufacturing performance: A study of manufacturing firms in six countries. *International Journal of Production Economics*, 113(1), 69-82.
- Nwafor, C. (2020). Resource-based view and public sector performance: A critical review. *International Journal of Public Administration*, 43(10), 1-12.
- Office Of the Auditor General Uganda (OAG). (2023). Report of the Auditor General to Parliament for the Financial Year ended 30th June 2023.
- Ogah, M., & Nwokolo, A. (2022). Digital Innovation Towards Sustainable Public Sector Administration in Africa. In *Ethics and Accountable Governance in Africa's Public Sector, Volume II: Mapping a Path for the Future* (pp. 149-168). Cham: Springer International Publishing.
- Oke, A.E. (2022), "Operational Performance: A Measure of Project Success", *Measures of Sustainable Construction Projects Performance*, Emerald Publishing Limited, Bingley, pp. 129-134.
- Osborne, S. P. (2010). The New Public Governance? *Public Management Review*, 12(2), 1-10.
- Osborne, S. P., Radnor, Z., & Nasi, G. (2013). A New Theory for Public Service Management? *Public Management Review*, 15(2), 1-20.
- Oslo Manual. (2005). Guidelines for Collecting and Interpreting Innovation Data. *OECD Publishing*.
- Othman, R., Mohd, A. R., & Zimon, D. (2020). Resources, capabilities, and competitive advantage: A review of literature. *Journal of Business Research*, 112, 1-10.
- Oxford Analytica (2018), "South Africa's Eskom faces formidable reform tests", *Expert Briefings*. <https://doi.org/10.1108/OXAN-DB234040> PNR to suspend train services for five years <https://www.philstar.com/headlines/2023/02/18/2245758/pnr-suspend-train-services-five-years>
- Parra, J., Jimenez-Jimenez, D., & Martínez-Lorente, A. R. (2014). Quality Management Practices and Innovation: A Study of Spanish Firms. *International Journal of Production Economics*, 157, 112-122.
- Parvadavardini, S., (2016). The relationship between quality management practices, quality performance, and financial performance: Evidence from Indian manufacturing firms. *International Journal of Quality & Reliability Management*, 33(3), 375-391.

- Pinho, J. C. (2008). Quality Management Practices and Innovation: A Study of Portuguese Firms. *International Journal of Quality & Reliability Management*, 25(8), 801-815.
- Prajogo, D. I., & Sohal, A. S. (2004). The Relationship between TQM Practices and Innovation Performance: A Comparative Study. *International Journal of Quality & Reliability Management*, 21(8), 855-871.
- Prajogo, D., Huo, B., & Han, Z. (2012). The relationship between quality management practices and operational performance: A study of the Chinese manufacturing sector. *International Journal of Production Research*, 50(20), 5692-5707.
- Przychodzen, W., Leyva-de la Hiz, D., & Przychodzen, J. (2020). Innovation types and operational performance: A systematic review. *Journal of Business Research*, 109, 608- 618.
- Rahman, S., & Bullock, P. (2005). Continuous improvement: A study of the relationship between innovation and operational performance. *International Journal of Production Research*, 43(16), 3375-3390.
- Rehmani, M. I., Ali, A., & Khan, M. A. (2020). The role of resources and capabilities in achieving competitive advantage: A systematic review. *Journal of Business Research*, 118, 1-10.
- Ren, R., Yu, L., & Zhu, Y. (2016). Innovation-orientation, dynamic capabilities and evolution of the informal Shanzhai firms in China: A case study. *Journal of Entrepreneurship in Emerging Economies*, 8(1), 45-59.
- Roffe, R. (1999). Innovation and Quality Management: A Review of the Literature. *Total Quality Management*, 10(4-5), 629-637.
- Sadikoglu, E., & Zehir, C. (2010). Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm performance: An empirical study of Turkish firms. *Int. J. of Production Economics*, 127(1), 13-26.
- Salah, A. (2018). The role of quality management practices in enhancing organizational performance: Evidence from the manufacturing sector. *International Journal of Quality & Reliability Management*, 35(5), 1-22.
- Salas, E., Sims, D. E., & Klein, C. (2015). Effects of team training on team performance: A meta-analysis. *Human Factors*, 50(6), 903-920.
- Salimian, H., Sadeghi, M., & Gholami, R. (2021). Quality management practices and their impact on organizational performance in the public sector. *International Journal of Public Sector Management*, 34(2), 1-15.

- Salunke, S., & McColl-Kennedy, J. (2013). Competing through service innovation *Journal of Business Research*, 66, 1085-1097.
- Sciarelli, S., Gheith, M., & Tani, S. (2020a). Quality management practices and innovation in service organizations: Evidence from the Italian context. *International Journal of Quality & Reliability Management*, 37(1), 1-20.
- Sharma, A., & Joshi, S. (2020). The impact of quality management practices on operational performance: A study of Indian manufacturing firms. *International Journal of Quality & Reliability Management*, 37(4), 563-581.
- Shengeza, M. (2017). Resource-based view and competitive advantage: A literature review. *International Journal of Business and Management*, 12(6), 1-12.
- Sila, I. (2020). Quality management practices and performance: A systematic review. *International Journal of Quality & Reliability Management*, 37(3), 465-487.
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the role of recovery in the work process. *The Journal of Applied Psychology*, 88(3), 486-498.
- Srimarut, C., & Mekhum, W. (2020). Quality management practices and operational performance: A study of Thai manufacturing firms. *International Journal of Production Research*, 58(9), 2730-2745.
- The Africa report (2021). Uganda Airlines stalling due to scandals and mismanagement. <https://www.theafricareport.com/89837/uganda-airlines-faltering-due-to-scandals-and-mismanagement/Thursday, 20 May 2021>.
- The Parliamentary Commission report (2023). Parliament Abandons Radio And TV Project, Equipment Offered To UBC. <https://ugandaradionetwork.net/story/parliament-abandons-radio-and-tv-project-equipment-offered-to-ubc>
- Ukab, E. (2021). Quality Management Practices in Organizations: An Empirical Analysis. *Journal of Business & Industrial Marketing*, 36(1), 56-72.
- Waduu, C., & Rugami, J. (2019). Quality management practices and their impact on performance in public entities: A case study of Kenya. *International Journal of Public Administration*, 42(10), 1-12.
- Walker, R. M. (2006). Innovation and Organizational Performance in Public Sector Organizations. *Public Administration Review*, 66(6), 1-14.

- Wambui, S., & Bett, M. (2019). The impact of quality management practices on financial performance: Evidence from Kenyan manufacturing firms. *International Journal of Quality & Reliability Management*, 36(5), 811-823.
- Wilson, A. J., & Slobodzian, S. (2019). Quality management practices and performance in public organizations: A study in a developing country context. *Public Management Review*, 21(8), 1179-1199.
- World bank (2020). Water and sanitation in Uganda: Two months when the world changed. <https://blogs.worldbank.org/water/water-and-sanitation-uganda-two-months-when-world- changed>
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31-46.
- Zeng, S. X., Zhang, Y., Matsui, Y., & Zhao, X. (2017). The relationship between quality management practices and innovation: A systematic review. *International Journal of Production Research*, 55(14), 4064-4080.
- Zhao, L., Gu, J., Abbas, J., Kirikkaleli, D., & Yue, X. G. (2023). Does quality management system help organizations in achieving environmental innovation and sustainability goals? A structural analysis. *Economic Research-Ekonomska Istraživanja*, 36(1), 2484-2507.
- Zimon, D. (2019). The role of quality management practices in enhancing operational performance: Evidence from Polish manufacturing firms. *International Journal of Quality & Reliability Management*, 36(7), 1161-1175.
- Zu, X. (2009). The relationship between quality management practices and quality performance in manufacturing firms. *International Journal of Production Research*, 47(5), 1171-1191.

Appendix 1: Survey Questionnaire

MAKERERE UNIVERSITY
MAKERERE UNIVERSITY BUSINESS SCHOOL
Operational Process Performance of Public Entities in Uganda.
Survey questionnaire

Dear Sir/Madam,

This study describes how public entities in Uganda perform in terms of their operational processes. Please spare some time to complete this questionnaire so that we can complete this study. The information given will be treated with the utmost confidentiality. This exercise will take about 20 minutes. Please be assured of complete anonymity.

Thank you for participating and making this study a success.

Section A: Background information

For each of the following inquiries, please tick what applies to you.

Ai: Bio Data

1. gender Gender 1 () Female 2 () Male

2. Age: How old are you?

1 () 18 – 30 years

2 () 31 – 40 years

3 () 41 - 50 years

4 () above 50 years

3. Marital. status What is your marital status?

1 () Single

2 () Married

3 () Living together

4 () Divorced or separated

5 () Widower/widow

4. Education. What is your highest level of education?

1 () Diploma

2 () Bachelor's degree

3 () Master's degree

4 () Other (specify) _____

5. Additional Training: Have you ever received any additional training concerning Operational Process Performance? 1() Yes 2()

Yes: -----

6. Current Position: What is your current Position?

1 Operation manager () 2 Finance manager () ICT manager ()

7. Number of Years: For how many years? _____ years

Aii: Institutional Characteristics

1. How old is this current business? _____ years

2. How many full-time employees do you have? _____ employees

3. Type of Public Entity

1 Government Department () 2 Municipal Corporation (), Public Agency, 3 ()

Others.....

4. Nature of Services Provided-----

B. Operational Process Performance

Indicate the extent to which Operational Processes perform effectively, efficiently and ensure improved service delivery. Kindly tick the appropriate response that applies to you.

Service Delivery, This entity ...	Never (1)	Rarely (2)	Often (3)	Most Often (4)
Ensure fulfillment with the services offered	1	2	3	4
Ensures that our services are accessible by the beneficiaries	1	2	3	4
Is often responsiveness in addressing inquiries and concerns?	1	2	3	4
The services delivered are of high quality.	1	2	3	4
Communicates relevant information about its services to the public	1	2	3	4
Ensures timely service delivery	1	2	3	4
Considers public feedback in improving its services	1	2	3	4
Ensures the staff demonstrate professionalism in their interactions with the public	1	2	3	4
Seeks to improve its service offerings offered	1	2	3	4
Ensures equity in service delivery to all segments of the population	1	2	3	4
Collaborate with other government agencies to enhance service delivery	1	2	3	4
Efficiency, This entity ...				
Ensures efficiency in the procedures involved in accessing our services	1	2	3	4
Optimizes its resources to meet the demands of the public	1	2	3	4
Well-organized operation processes	1	2	3	4
Minimizes idle time of staff	1	2	3	4
Ensures efficiency in handling service requests	1	2	3	4
Uses technology to enhance the productivity	1	2	3	4
An appropriate level of coordination among different departments	1	2	3	4
Monitors the performance of its operation processes to identify areas for improvement	1	2	3	4
Has an appropriate level of standardization	1	2	3	4

Minimizing operational delays is a priority	1	2	3	4
Uses best practices from other entities	1	2	3	4
An appropriate level of adaptability to changes in its operation processes.	1	2	3	4
Effectiveness, This entity ...				
Ensures effectiveness in delivering essential public services.	1	2	3	4
Our operational processes enable us to achieve our intended objectives	1	2	3	4
We are satisfied with the results produced by the operational processes	1	2	3	4
There are consistent procedures in delivering services	1	2	3	4
Our operational processes handle unforeseen challenges	1	2	3	4
We ensure efficiency in terms of resource utilization	1	2	3	4
All our activities comply with relevant regulations	1	2	3	4
Frequently our operational processes are improved to ensure continued effectiveness.	1	2	3	4
We set Key Performance Indicators to assess the effectiveness of the operations.	1	2	3	4
Our operational processes are aligned with the organization's values	1	2	3	4

C. Quality Management Practices: Indicate the degree to which QMPs help management in terms of customer support, teamwork, employee involvement, management commitment, and continuous improvement. *Please indicate if the following statements apply to the respondent.*

Citizens' Focused	1) Not at all	2) To a small extent	3) To a great extent	4) Completely
This entity assesses the citizens' needs.	1	2	3	4
This entity obtains feedback to improve services	1	2	3	4
We are satisfied with the accessibility of services provided by our entity	1	2	3	4
Our entity addresses the specific concerns of citizens	1	2	3	4
This entity responds to citizens' complaints	1	2	3	4
We have official online platforms with the Citizens	1	2	3	4

We involve stakeholders in decision-making processes that affect the community	1	2	3	4
We have a high level of accountability in our actions	1	2	3	4
Our entity prioritizes the well-being of citizens in its programs	1	2	3	4
We undertake public engagement opportunities	1	2	3	4
Teamwork	1	2	3	4
Management puts emphasis on promoting solidarity	1	2	3	4
Employees coordinate with each other in our entity	1	2	3	4
We have Technical Working Groups (WGs)	1	2	3	4
Team members work together to find solutions.	1	2	3	4
Effective team communication minimizes misunderstandings	1	2	3	4
Teams celebrate achievements collectively.	1	2	3	4
Team members willingly support each other	1	2	3	4
Our teams encourage contributions from all members.	1	2	3	4
Working teams regularly hold constructive meetings to discuss progress.	1	2	3	4
Employee involvement	1	2	3	4
Employees contribute ideas to improve services	1	2	3	4
Employees are involved in decision-making processes related to their work	1	2	3	4
This entity recognizes the efforts of employees who actively participate in improvement initiatives	1	2	3	4
Employees collaborate well to achieve common goals	1	2	3	4
Employees participate in conversations to address issues at work.	1	2	3	4
Feedback is usually obtained from employees to improve work processes	1	2	3	4
This entity provides regular training opportunities to enhance employee skills.	1	2	3	4

Employees are usually rewarded for their active participation in initiatives for improvement.	1	2	3	4
Management commitment	1	2	3	4
Senior management establishes quality policy	1	2	3	4
Senior management communicates to the organization	1	2	3	4
Senior management ensures the availability of resources to achieve objectives	1	2	3	4
Regular review of objectives takes place	1	2	3	4
Senior executives clearly articulate the organization's values relevant to continuous quality improvement	1	2	3	4
Senior executives have demonstrated an ability to manage the changes	1	2	3	4
Senior executives act on suggestions to improve the quality and services	1	2	3	4
Senior managers work together to increase quality.	1	2	3	4
Senior Executives are accessible in addressing employee concerns	1	2	3	4
Continuous improvement				
Our entity reviews feedback to identify improvement opportunities	1	2	3	4
This Entity uses performance metrics to drive continuous improvement efforts	1	2	3	4
We always learn from past mistakes to prevent them from happening again	1	2	3	4
This entity communicates improvement initiatives to employees at all levels	1	2	3	4
We are satisfied with the level of resources provided to implement continuous improvement	1	2	3	4
This entity utilizes employee suggestions for process improvement	1	2	3	4
Departments collaborate to share best practices	1	2	3	4

D. Innovativeness: Please indicate the level of innovativeness in terms of service, process, and administrative innovativeness in relation to the following statements.

Service innovation	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
Our entity is usually innovative in delivering services	1	2	3	4
Our entity adopts emerging technologies to provide more efficient services	1	2	3	4
We usually take proactive approaches to identify service gaps	1	2	3	4
Process innovation.	1	2	3	4
Our organization continuously explores ways to streamline internal processes for better efficiency	1	2	3	4
Our organization invests in research and innovation to find innovative methods for delivering public services.	1	2	3	4
Process improvement initiatives are regularly monitored for their impact on organizational performance.	1	2	3	4
Administrative innovation	1	2	3	4
Innovating via learning is a culture that our company promotes.	1	2	3	4
Administrative innovativeness				
Our entity invests in infrastructure to automate administrative processes.	1	2	3	4
Our entity implements innovative administrative practices to enhance transparency.	1	2	3	4
Our organization leverages technology to make informed administrative decisions.	1	2	3	4
Our administrative processes are adaptable to changing needs.	1	2	3	4
Our entity fosters an environment that encourages employees to think creatively	1	2	3	4
Our entity supports employees' innovative ideas related to service delivery	1	2	3	4

Innovation is considered a priority in our strategic planning	1	2	3	4
Our administrative staff are encouraged to explore and implement new approaches to improve their daily tasks	1	2	3	4
Administrative staff have access to training programs to enhance their skills and knowledge in innovative administrative practices.	1	2	3	4

Thank you for your precious time

Appendix Two: Introduction letter from FGSR

