

MOSHI CO-OPERATIVE UNIVERSITY

**DETERMINANTS FOR THE EFFECTIVE IMPLEMENTATION OF ANNUAL
PROCUREMENT PLAN AS MODERATED BY THE
E-PROCUREMENT SYSTEM: A CASE OF MOSHI MUNICIPALITY**

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PROCUREMENT PLAN AS MODERATED BY THE
E-PROCUREMENT SYSTEM: A CASE OF MOSHI MUNICIPALITY**

**BY
SAFINA IDDI MMBAGA**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF
ARTS IN PROCUREMENT AND SUPPLY MANAGEMENT OF
MOSHI CO-OPERATIVE UNIVERSITY**

DECEMBER, 2025

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I, **Safina Iddi Mmbaga**, declare that this Dissertation is my own original work and that it has not been presented and will not be presented to any other higher learning Institution for a similar or any other academic award.

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Moshi Co-operative University a Dissertation titled, “*Determinants for the Effective Implementation of Annual Procurement Plan as Moderated by the E-Procurement System in Moshi Municipality*” in partial fulfilment of the requirements for the award of a degree of Master of Arts in Procurement and Supply Management of Moshi Co-operative University.

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DEDICATION

This Dissertation is dedicated to my beloved family, whose unwavering encouragement and supportive environment were invaluable throughout this journey. I also extend this dedication to my three beautiful daughters, with the hope that their aspirations and efforts will surpass this academic achievement and lead them to even greater accomplishments.

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TABLE OF CONTENTS

DECLARATION AND COPYRIGHT	i
CERTIFICATION.....	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
LIST OF APPENDICES	xi
LIST OF ABBREVIATIONS	xii
ABSTRACT	xiii
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	3
1.3 Research Objectives.....	4
1.3.1 General objective	4
1.3.2 Specific objectives	4
1.4 Research Hypotheses	5
1.5 Significance of the study.....	5
CHAPTER TWO.....	6
LITERATURE REVIEW	6
2.1 Definitions of Key Terms.....	6
2.1.1 Procurement	6
2.1.2 Annual Procurement Plan	6
2.1.3 Effective implementation	6
2.1.4 E-procurement.....	7
2.2 Theoretical Review	7
2.2.1 Technology Acceptance Model.....	7
2.2.2 Resource-Based Theory (RBT).....	8
2.3 Empirical Review.....	9
2.3.1 The influence of top management support on the effective implementation of APP	9

2.3.2	The influence of the legal framework on the effective implementation of the APP	12
2.3.3	The influence of stakeholders' engagement on effective implementation of the APP	15
2.3.4	The influence of the e-procurement system as a moderate effect on the effective implementation of the APP	18
2.4	Conceptual Framework	22
CHAPTER THREE		24
RESEARCH METHODOLOGY		24
3.1	Research Design.....	24
3.2	Geographical Coverage.....	24
3.3	Population, Sample and Sampling Strategies	25
3.3.1	Study Population.....	25
3.3.2	Sample size	25
3.3.3	Sampling procedures.....	26
3.4	Types and Sources of Data.....	27
3.5	Data Collection Methods	27
3.5.1	Questionnaires.....	28
3.5.2	Interview	28
3.5.3	Documentary review	29
3.6	Data Validity and Reliability.....	29
3.6.1	Validity of data	29
3.6.2	Reliability of data.....	30
3.7	Measurement of Study Variables	30
3.8	Data Analysis Techniques	31
3.8.1	Quantitative data analysis	31
3.8.2	Qualitative Data Analysis.....	32
3.9	Ethical Considerations	33
CHAPTER FOUR.....		34
FINDINGS AND DISCUSSION		34
4.1	Overview	34
4.2	Response Rate	34
4.3	Demographic Characteristics of the Respondents	34

4.3.1	Education Level of Respondents.....	35
4.3.2	Years of Experience in Procurement.....	35
4.4	Influence of Top Management Support on the Effective Implementation of the Annual Procurement Plan	35
4.4.1	Descriptive Analysis of top management support on the effective implementation of the annual procurement plan.....	36
4.4.2	Multiple Linear Regression Modelling (MLRM) analysis for top management support on effective implementation of the annual procurement plan.....	39
4.5	Influence of Legal Framework on the Effective Implementation of the Annual Procurement Plan	41
4.5.1	Descriptive analysis of legal framework on the effective implementation of the annual procurement plan.....	41
4.5.2	Multiple Linear Regression Modelling (MLRM) analysis for legal framework on effective implementation of the annual procurement plan.....	45
4.6	Influence of Stakeholders' Engagement on the Effective Implementation of the Annual Procurement Plan	47
4.6.1	Descriptive analysis of stakeholders' engagement on the effective implementation of the annual procurement plan.....	48
4.6.2	Multiple Linear Regression Modelling Analysis for E-Procurement system on effective implementation of the annual procurement plan.....	50
4.7	The Influence of the E-Procurement System as a Moderating Effect on the Effective Implementation of the APP	53
4.7.1	Descriptive analysis of e-procurement system as a moderation effect on the effective implementation of the annual procurement plan.....	53
4.7.2	Multiple Linear Regression Modelling Analysis for Stakeholders' Engagement on Effective Implementation of the Annual Procurement Plan	55
4.8	Effective Implementation of the Annual Procurement Plan (APP)	58
4.8.1	Descriptive analysis of effective implementation of the annual procurement plan.....	58
CHAPTER FIVE.....		61
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....		61
5.1	Introduction.....	61
5.2	Summary of the study	61

5.2.1	Top management support.....	61
5.2.2	Legal framework.....	62
5.2.3	Stakeholders' engagement.....	62
5.2.4	E-Procurement System.....	62
5.3	Conclusion	63
5.4	Contribution of the Study.....	64
5.4.1	Practical contribution	64
5.4.2	Theoretical contribution.....	65
5.5	Recommendations	65
5.6	Areas for Further Research	66
REFERENCES.....		67
APPENDICES		73

LIST OF TABLES

Table 3. 1: Sample Distribution.....	26
Table 3. 2: Reliability Test Results.....	30
Table 3. 3: Matrix showing measurements of variables.....	31
Table 4. 1: Demographic characteristics of respondents.....	35
Table 4.2: Top management support on effective implementation of the APP	38
Table 4. 3: Model Summary for Top Management Support on Effective Implementation of the Annual Procurement Plan	39
Table 4. 4: ANOVA for Top Management.....	40
Table 4. 5: Regression Coefficients for Top Management.....	40
Table 4.6: The influence of legal framework on effective implementation of the APP	44
Table 4.7: Model Summary for Legal Framework on Effective Implementation of the Annual Procurement Plan.....	45
Table 4.8: ANOVA for Legal Framework	46
Table 4.9: Regression Coefficients for Legal Framework	47
Table 4. 10: Stakeholders' engagement on effective implementation of the APP.....	50
Table 4.11: Model Summary for E-Procurement System on Effective Implementation of the Annual Procurement Plan.....	51
Table 4. 12: ANOVA for E-Procurement System.....	52
Table 4.13: Regression Coefficients for E-Procurement System.....	52
Table 4.14: The influence of the e-procurement system as a moderating effect on the effective implementation of the APP.....	55
Table 4.15: Model Summary for Stakeholders' Engagement on Effective Implementation of the Annual Procurement Plan	56
Table 4. 16: ANOVA for Stakeholders' Engagement	56
Table 4.17: Regression Coefficients for Stakeholders' Engagement	57
Table 4.18: Descriptive analysis of effective implementation of the Annual Procurement Plan (APP)	60

LIST OF FIGURES

Figure 2.1: The relationship between procurement determinants and the effective implementation of the Annual Procurement Plan (APP)	22
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LIST OF APPENDICES

Appendix 1: Questionnaire.....	73
Appendix 2: Checklist for Key Informant Interview	75
Appendix 3: Documentary Review Guide	76
Appendix 4: Research Permit Letters.....	77
Appendix 5: Proofreading certificate	80
Appendix 6: Plagiarism Report	81
Appendix 7: Manuscript.....	84

LIST OF ABBREVIATIONS

APP	-	Annual Procurement Plan
CMT	-	Council Management Team
FAD	-	Finance and Accounting Department
GDP	-	Gross Domestic Product
LGAs	-	Local Government Authorities
MDC	-	Moshi District Council
MMC	-	Moshi Municipal Council
MoCU	-	Moshi Co-operative University
NeST	-	National Electronic Procurement System in Tanzania
PMU	-	Procurement Management Unit
PPRA	-	Public Procurement Regulatory Authority
QDA	-	Qualitative Data Analysis
URT	-	United Republic of Tanzania

ABSTRACT

The effectiveness of the Annual Procurement Plan (APP) implementation within Tanzanian Local Government Authorities (LGAs) has raised growing concern. This study aimed to examine the determinants influencing effective APP implementation in Moshi Municipality, with a particular focus on top management support, legal framework, stakeholder engagement, and the moderating role of the e-procurement system. Data were collected from staff in the Procurement Management Unit, Tender Board, Finance Department, and User Departments, key actors responsible for procurement planning and execution, using a cross-sectional research design. Yamane's (1967) formula was applied to determine a sample size of 159 from a population of 265, with 136 respondents participating, yielding an 85.5% response rate. Purposive and simple random sampling techniques were employed for questionnaire distribution, while interviews with senior management provided qualitative insights. Data were analysed using Descriptive statistics and multiple linear regression in SPSS. Results from Multiple Linear Regression Analysis revealed statistically significant positive influences of top management support ($p = 0.000$), legal framework ($p = 0.001$), stakeholder engagement ($p = 0.001$), and the e-procurement system ($p = 0.001$) on the effective implementation of the APP. The overall model was statistically significant ($p = 0.000$), and goodness-of-fit was confirmed by F-values ranging from 92.461 to 602.553. It was concluded that strategic leadership, regulatory compliance, inclusive stakeholder participation, and digital infrastructure are critical for successful APP execution. The study recommends that LGAs and policymakers strengthen managerial oversight, simplify legal tools to facilitate better interpretation, institutionalise stakeholder engagement protocols, and accelerate the adoption of NeST through targeted training and infrastructure investment. These measures are essential to improve procurement transparency, efficiency, and overall public financial management in Tanzanian local governments.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The Annual Procurement Plan (APP) serves as a strategic blueprint that guides an organisation's acquisition of goods, works, and services within a specific fiscal year. By consolidating projected needs, estimated costs, and delivery timelines, the APP ensures that procurement activities align with organisational priorities and available resources (Chalwe & Nyimbili, 2023). In the public sector, particularly within Local Government Authorities (LGAs), the APP is more than a technical document; it is a vital governance tool that promotes accountability, disciplined resource allocation, and transparency (Obura, 2020). When effectively implemented, the APP helps prevent poor financial planning, cost overruns, project delays, and the misuse of public funds, thereby strengthening overall organisational performance and service delivery (Elfes, 2020).

Recognising the critical role of procurement, governments worldwide have increasingly turned to digital solutions to improve their procurement processes. Electronic procurement (e-procurement) systems, which utilise digital platforms for tendering, supplier selection, and contract management, represent a significant evolution in this field. The integration of e-procurement with the APP creates a powerful synergy: while the APP provides the strategic framework, e-procurement offers the technological infrastructure to implement that plan efficiently. This integration reduces paperwork, ensures timely communication, and creates a traceable record of transactions, thereby enhancing overall efficiency and reducing opportunities for corruption (Kasose, 2023; Shatta, 2020).

The Technology Acceptance Model (TAM), originally developed by Davis (1986), posits that the successful adoption of any technology is primarily determined by its Perceived Usefulness and Perceived Ease of Use. The e-procurement system (NeST) is the technology in question. Its effectiveness as a moderating factor hinges on whether procurement officers and other stakeholders find it useful for executing the APP and easy to integrate into their daily workflows. The model helps in understanding that without positive perceptions on these two fronts, the potential of e-procurement to improve APP implementation will remain unrealised.

Globally, the effective implementation of APP is recognised as a cornerstone of sound public financial management and economic growth. For instance, in the United States, federal procurement expenditure is projected to reach USD 665 billion in 2025, with the APP ensuring that these substantial funds are directed toward national priorities such as defence and infrastructure. Similarly, in the United Kingdom and other developed nations, the APP provides businesses with predictability, fosters competition, and supports small and medium enterprises. According to the World Bank, public procurement accounts for approximately 18.42% of the global Gross Domestic Product (GDP), underscoring its strategic importance to national economies (Arrowsmith, 2025).

In Sub-Saharan Africa, countries like South Africa and Nigeria have embarked on procurement reforms linking APP implementation with e-procurement to improve governance and accountability. Despite these efforts, challenges such as cost escalations, delayed disbursements, and weak financial planning persist. For example, approximately 30% of procurement projects in Nigeria experience overruns due to these issues (Usman, 2020), reflecting broader continental challenges, including a lack of skills, corruption, and poor APP implementation (Owusu-Ansah, 2024).

In Tanzania, procurement accounts for a significant share of public expenditure and is critical to supporting national development. The government has undertaken notable reforms, including the enactment of the Public Procurement Act No. 10 of 2023 and its accompanying regulations of 2024, as well as the introduction of the National Electronic Procurement System in Tanzania (NeST). These reforms aim to enhance transparency, reduce corruption, and strengthen accountability (Mchopa et al., 2024). However, reports from the Public Procurement Regulatory Authority (PPRA, 2022) and the National Audit Office of Tanzania (NAOT, 2020) indicate persistent challenges. These include procurement through non-competitive methods, failure to adhere to APPs, unrealistic budgets, weak requirement identification, and inadequate capacity of procurement personnel.

A particularly telling statistic from the PPRA (2023) shows that only 6 of 184 LGAs (3.3%) had effectively implemented the NeST system. A compliance audit report for the 2022/2023 financial year further showed that 48 audited procuring entities

exhibited poor performance. This signifies a critical gap between policy intent and practical implementation, highlighting a notable lack of acceptance and adherence to both the e-procurement system and the regulatory framework.

These national challenges are mirrored in Moshi Municipality, which has struggled with delayed projects, cost overruns, and the underutilisation of allocated funds. Inadequate procurement planning has led to the misprioritization of projects, disrupting service delivery and limiting socio-economic development (Masoud et al., 2023). Furthermore, inadequate support from senior management and insufficient training for procurement officials have contributed to the poor utilisation of the e-procurement system and limited integration of the APP into broader planning frameworks (Msomi, 2021; Tekka, 2023).

The relationship between key determinants and the effective implementation of the APP is not direct, but is influenced or moderated by the presence and effective use of the e-procurement system. Strong top management support leads to better APP implementation, but this effect could be significantly stronger if an e-procurement system is in place to streamline and monitor the process. Hence, this research aims to identify the key factors in APP implementation and to examine in detail the role of the e-procurement system in these relationships, thereby offering a clearer picture of how procurement efficiency and transparency can be enhanced in Moshi Municipality.

1.2 Statement of the Problem

Effective implementation of the Annual Procurement Plan (APP) is vital for ensuring efficient public spending, timely service delivery, and economic growth in Tanzania. The United Republic of Tanzania (URT, 2025) projects a GDP growth of 5.4% for 2024, with public procurement playing a pivotal role in job creation (over 523,000 jobs from 2021–2025) and fostering industrial development. However, inefficiencies in APP implementation within Local Government Authorities (LGAs) undermine these goals, leading to delays, cost overruns, and compromised service delivery. In Moshi Municipality, these challenges are particularly evident, with specific instances such as the delayed construction of the Mawenzi Market redevelopment project (Moshi Municipal Council, 2024), which exceeded its budget by 15% due to poor procurement planning, and the incomplete delivery of school furniture in 2023, which disrupted educational services for over 2,000 students (Moshi Municipal Council, 2024).

The Public Procurement Regulatory Authority (PPRA, 2023) reports that over 40% of procurement contracts in Tanzanian LGAs face delays due to misaligned budgets, inadequate stakeholder engagement, and limited adoption of the National Electronic Procurement System in Tanzania (NeST). In Moshi Municipality, only 10% of procurement transactions were fully processed through NeST in the 2022/2023 financial year, reflecting low digital integration (PPRA, 2023). These inefficiencies contribute to Tanzania's rising national debt, projected at 52.7% of GDP in 2024 (URT, 2025), and erode public Trust in governance. Despite reforms such as the Public Procurement Act No. 10 of 2023 and its 2024 Regulations, which aim to enhance transparency and accountability, Moshi Municipality continues to grapple with issues including weak top management support, unclear legal interpretations, and insufficient stakeholder involvement (Masoud et al., 2023; Tekka, 2023).

While existing studies have explored compliance challenges and procurement planning in Tanzania's public sector, such as those by Ntangeki et al. (2023) and Kitundu (2024), they often overlook the specific interplay among top management support, legal frameworks, stakeholder engagement, and e-procurement systems in driving APP effectiveness. This research gap is critical, as these factors directly influence procurement outcomes in LGAs like Moshi Municipality. The current study addresses this gap by examining how these determinants shape APP implementation and how the e-procurement system moderates their impact.

1.3 Research Objectives

1.3.1 General objective

The general objective of this study is to examine the determinants of the effective implementation of the Annual Procurement Plan, as moderated by the e-procurement system, in Moshi Municipality.

1.3.2 Specific objectives

Specifically, the study intends to:

- i. To assess the influence of top management support on the effective implementation of the Annual Procurement Plan in Moshi Municipality.
- ii. To determine the effect of the legal framework on the effective implementation of the Annual Procurement Plan in Moshi Municipality.

- iii. To analyse the influence of stakeholders' engagement on the effective implementation of the Annual Procurement Plan in Moshi Municipality.
- iv. To examine the moderating effect of the e-procurement system on the effective implementation of the Annual Procurement Plan in Moshi Municipality.

1.4 Research Hypotheses

- i. H₀₁: Top management support has no significant influence on the effective implementation of the Annual Procurement Plan in Moshi Municipality.
- ii. H₀₂: The legal framework has no significant influence on the effective implementation of the Annual Procurement Plan in Moshi Municipality.
- iii. H₀₃: Stakeholders' engagement has no significant influence on the effective implementation of the Annual Procurement Plan in Moshi Municipality.
- iv. H₀₄: The e-procurement system does not significantly moderate the effective implementation of the Annual Procurement Plan in Moshi Municipality.

1.5 Significance of the study

This study aligned with the existing legal frameworks, such as the Public Procurement Act, 2023, and its regulation, 2024, which mandate LGAs to prepare and implement the APP effectively. Hence, this study would ensure compliance with this regulation among local government officials, procurement officers, and stakeholders. This would support the Public Procurement Regulatory Authority (PPRA) guideline on emphasising stakeholders' engagement, the use of technology, such as an e-procurement system, and resource allocation in the procurement process. Policy makers such as the Ministry of Finance and Planning, PPRA, LGAs, and the Parliamentary Committee on Public Accounts need to use these findings to refine existing regulations and policies, ensuring they align with the practical needs and challenges identified. Also, this study would contribute to the body of knowledge by filling gaps in understanding the specific determinants influencing procurement effectiveness in local government contexts, thereby informing future research and guiding best practices in public sector procurement management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definitions of Key Terms

2.1.1 Procurement

According to PPRA (2020), procurement is the entire process of acquiring goods, works, consultancies, and non-consultancy services for public projects, guided by the Public Procurement Act, 2023, and its regulation, 2024. URT (2023) defined "procurement" as buying, purchasing, renting, leasing, or otherwise acquiring any goods, works, or services by a procuring entity and includes all functions that pertain to the obtaining of any goods, works, or services, including description of requirements, selection and invitation of tenderers, and preparation and award of contracts. In this study, procurement is defined as the process of acquiring goods, works, and services in accordance with legal frameworks.

2.1.2 Annual Procurement Plan

According to the World Bank (2020), an APP is a document that specifies the procurement process to be used by a procuring entity using public funds. It involves activities that must support the public body's strategic objectives. According to Simeo *et al.* (2023), an APP is a document that identifies and consolidates requirements, specifies a defined timeframe, usually an annum, for procurement to deliver them as and when required for the effective execution of an organisation. In this study, an APP refers to a systematic document of the Moshi Municipality that outlines its purchasing needs and strategies for a specific fiscal year. It is a comprehensive planning tool that details the goods, services, and works to be implemented, commonly including estimated costs, procurement timelines, and the relevant procurement methods to be used.

2.1.3 Effective implementation

Changalima and Mdee (2023) defined effective implementation as a process that involves strategic execution to ensure efficient, cost-effective, and compliant acquisition of goods, services, or infrastructure. This ensures that the APP reflects the organisation's strategic objectives, budget and operational needs. In the current study,

effective implementation means adhering to the Public Procurement Act and the Public Procurement Regulations, which govern procurement in Tanzania's public sector.

2.1.4 E-procurement

According to PPRA (2020), e-procurement refers to the use of digital platforms and technology to manage and automate the procurement of goods, services, or works. In the current study, e-procurement is primarily facilitated through the National Electronic Procurement System in Tanzania (NeST), as mandated by the Public Procurement Regulatory Authority (PPRA) under the Public Procurement Act.

2.2 Theoretical Review

This study is guided by two complementary theories: the Technology Acceptance Model (TAM) and the Resource-Based Theory (RBT). Together, these theories provide a conceptual basis for understanding the behavioural and resource-related factors that affect the effective execution of the Annual Procurement Plan (APP) in Moshi Municipality, with the e-procurement system as a moderator.

2.2.1 Technology Acceptance Model

The Technology Acceptance Model (TAM), originally proposed by Davis (1986), assumes that an individual's acceptance of information systems is determined by two major variables: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Concerning PU, users are more likely to adopt a technology if they believe it will enhance their performance or productivity. This is a core driver of technology acceptance. Regarding PEOU, the users are more likely to accept a technology if they perceive it as easy to use and requiring minimal effort. Ease of use also influences perceived usefulness.

Users' attitudes toward a technology are shaped by perceptions of its usefulness and ease of use, which, in turn, influence their intention to use it. The intention to use a technology is a direct predictor of actual usage. This intention is influenced by attitude and perceived usefulness. Lee *et al.* (2003) replicated and extended the TAM and explained the validity and reliability of the measurement for both PU and PEOU across different settings and information systems.

The main weakness of TAM is that it did not maintain its original form, like an organic being; TAM has ceaselessly evolved. This model is applied in the current study

because its factors influence users' attitudes, behavioural intentions, and actual use of a system in implementing an APP supported by electronic e-procurement systems, to assess and enhance user adoption, particularly among procurement officers in public authorities.

In this research, the Technology Acceptance Model (TAM) is utilised to illustrate the moderating influence of the e-procurement system on the other determinants: top management support, legal framework, and stakeholder engagement, that is, the influencing factors of the effective implementation of the APP. The e-procurement system (NeST) is a technological innovation in Tanzania's public procurement field. According to TAM, if procurement officers view NeST as beneficial and easy to use, they will be more inclined to adopt it and properly utilise it in the execution of the APP. The e-procurement system's moderating role indicates that the degree of interaction between institutional factors, such as management support or legal compliance, and APP implementation is determined by the extent of user acceptance and adoption of the digital system. For example, even if management allocates enough resources, the implementation of the APP will still be limited if the staff regard NeST as difficult or not beneficial. On the other hand, when the system is seen as helpful and easy to use, it stimulates the positive impact of management commitment, legal compliance, and stakeholder participation.

Thus, TAM is applicable in this study because it explains the behavioural and attitudinal dynamics behind technology adoption and demonstrates how user acceptance of the e-procurement system can strengthen or weaken the determinants influencing APP implementation in Moshi Municipality.

2.2.2 Resource-Based Theory (RBT)

The Resource-Based Theory (RBT), first introduced by Barney (1991), claims that a company's long-term effectiveness and competitive advantage depend on its capacity to obtain, develop, and utilise valuable, rare, inimitable, and non-substitutable resources. These resources include physical assets, human skills, institutional structures, and managerial capabilities, which together enable organisations to be effective and deliver higher-quality outcomes. In this research, RBT serves as a theoretical basis for identifying the factors that influence effective APP implementation: top management support, the legal framework, and stakeholder engagement. The theory holds that the

success of procurement plans depends on the degree to which an organisation can mobilise its internal resources (such as leadership, knowledge, and systems) and align them with external enablers (such as regulatory frameworks and stakeholder networks). The support of top management is an indicator of the organisation's leaders' capacity to allocate resources, make strategic decisions, and foster a culture of accountability, all of which are critical to improving the efficiency of the implementation process. The legal framework is an institutional resource that provides the necessary structure, rules, and enforcement mechanisms to ensure compliance, transparency, and consistency in procurement operations. Stakeholder engagement is a relational and social capital resource that not only enables the sharing of information and Trust building but also facilitates collaboration, leading to better integration of procurement activities with community needs.

The successful APP implementation in Moshi Municipality relies not merely on having those resources but also on how they are managed, integrated, and utilised to support procurement objectives. The lack of management commitment, poor stakeholder coordination, or ineffective enforcement of legal provisions are all signs of the underutilisation of crucial organisational resources, resulting in inefficiencies and delays in projects.

2.3 Empirical Review

2.3.1 The influence of top management support on the effective implementation of APP

Nzunda (2024) employed a quantitative approach with a sample of 195 employees from Busokelo Council in Tanzania, using descriptive and inferential statistics (linear regression) via SPSS. The findings indicated that top management support, through strategy formulation and leadership, significantly enhances procurement compliance ($\beta = 0.619$, $p = 0.000$), explaining 61.9% of the variance in APP implementation. Critically, the study's strength lies in its localised focus on Tanzanian LGAs and its alignment with the Public Procurement Act, but its limitations include potential response bias from self-administered questionnaires and a narrow geographic scope, which limits generalizability. A key contradiction arises when compared to broader studies: while Nzunda emphasises training for managers, it overlooks how e-

procurement moderates this effect—e.g., without digital tools like NeST, even strong support may fail to enforce compliance due to manual process inefficiencies.

In contrast, Bhutto and Shaikh (2023) used structural equation modelling (SEM) with 327 procurement professionals in Pakistan, revealing that top management support mediates the relationship between external pressures and sustainable procurement practices, with insignificant direct effects but strong indirect effects via leadership and collaboration. This study's methodological rigour, including parallel mediation testing across four models, provides robust evidence of top management's facilitative role. However, limitations such as reliance on survey data without longitudinal elements fail to capture long-term dynamics, and the focus on sustainability overlooks core APP efficiency metrics, such as timelines. A debate emerges here: Bhutto's findings contradict Nzunda's direct positive effects, suggesting context-specificity (e.g., external pressures in developing economies). Regarding e-procurement moderation, the study implies that digital systems amplify top management's influence by enabling real-time collaboration, but it lacks explicit testing. For example, e-procurement could moderate mediation pathways by improving perceived usefulness under TAM, potentially resolving contradictions in low-adoption settings such as Tanzania.

Jayeola et al. (2022) utilised partial least squares SEM (PLS-SEM) on 204 Malaysian SMEs, finding that top management support partially mediates (and moderates at low levels) the relationship between APP implementation and financial performance. The methodology's strength is its mediation-moderation analysis, which addresses causality more effectively than simple regression, but its limitations include a focus on SMEs rather than public entities, potentially underestimating institutional constraints in LGAs. This contrasts with Bhutto's indirect effects, highlighting a debate on direct vs. mediated influences: Jayeola suggests stronger effects in resource-constrained environments, yet both overlook e-procurement's role. Critically, e-procurement could moderate these effects by easing implementation burdens—if perceived as useful (per TAM), it strengthens low-level management support; otherwise, it weakens it, as seen in Tanzanian LGAs with low NeST adoption (PPRA, 2023).

Kagoya and Mbamba (2020) applied PLS-SEM to 277 Ugandan ministry employees and found that top management support positively moderates the relationships among

user participation, information system attributes, and e-government success. The mixed-methods foundation (surveys informed by Stakeholder and Information Success theories) adds depth, but the cross-sectional design limits causal inference, and self-reported data may overstate support levels. This study directly addresses e-procurement moderation, revealing a positive effect on implementation success ($p < 0.05$) but contradicting Jayeola by emphasising high-support contexts. Limitations include Uganda-specific findings that may not transfer to Tanzania's NeST challenges. The debate here centres on the direction of moderation: while Kagoya posits amplification, low digital literacy could reverse it, as e-procurement's perceived ease of use (TAM) mediates the support-implementation link.

Anin et al. (2024) used a contingent-agency perspective with survey data from 223 Ghanaian public organisations, analysed via regression, to demonstrate that top management commitment enhances the role of procurement audits in quality performance. Methodologically sound with contingency testing, the study's limitation is its reliance on self-reported APP outcomes, which risks bias, and it differentiates between internal/external audits without longitudinal validation. Contrary to Kagoya's e-government focus, Anin reveals conditional effects across varying commitment levels, questioning their universal applicability. E-procurement moderation is implicit: digital audits could strengthen the impact of commitment, but remain untested—e.g., NeST's traceability might address the under-theorisation of audits in the public sector.

Elbanna (2022) adopted an Actor Network Theory framework in a qualitative case study of an international organisation, uncovering complexities in top management support across multiple projects. The in-depth analysis critiques the assumption of constant support, but it also highlights limitations, including single-case generalizability and the lack of quantitative metrics. This contrasts with quantitative studies like Nzunda, highlighting a methodological debate: qualitative insights reveal nuances (e.g., fluctuating support) that are missed in regression analyses. E-procurement moderation is underexplored yet implied—digital systems could stabilise support in multi-project environments, per TAM's behavioural intentions.

PPRA (2023) conducted monitoring of APP activities for 236 entities and audits for 75 entities from the Regional Secretariat, Local Government Authorities, and the Tanzania

Rural and Urban Roads Agency during the financial year 2022/2023. Analysis of the evidence obtained during the audit have indicated that 28 entities equivalent to 37.3% of audited entities had poor compliance levels with scores below 60%, 40 entities equivalent to 53.3% of all audited entities had fair compliance levels ranging between 60 and 79 percent, and seven (7) entities equivalent to 9.3% of all audited entities had satisfactory compliance levels with scores of 80% and above.

The literature generally agrees that top management has a strong influence, but it debates whether this influence is direct or indirect and which factors mediate it. Some methodological limitations and contradictions still exist. One of the critical issues is e-procurement's moderating role, as perceived usefulness/ease of use according to TAM, where support is amplified; this aspect is not thoroughly examined, especially in Tanzanian LGAs, where low NeST adoption might counter the benefits. Thus, this study intends to assess the influence of top management support on the effective implementation of APP.

2.3.2 The influence of the legal framework on the effective implementation of the APP

Nzunda (2024) employed a quantitative approach with a sample of 195 employees from Busokelo Council in Tanzania, using descriptive and inferential statistics (linear regression) via SPSS. The findings indicated that top management support, through strategy formulation and leadership, significantly enhances procurement compliance ($\beta = 0.619$, $p = 0.000$), explaining 61.9% of the variance in APP implementation. Critically, the study's strength lies in its localised focus on Tanzanian LGAs, which aligns with the Public Procurement Act. However, its limitations include potential response bias from self-administered questionnaires and a narrow geographic scope, limiting generalizability. A key contradiction arises when compared with broader studies: while Nzunda emphasises training for managers, it overlooks that e-procurement moderates this effect. Without digital tools like NeST, even strong support may fail to enforce compliance due to manual process inefficiencies.

In contrast, Bhutto and Shaikh (2023) used structural equation modelling (SEM) with 327 procurement professionals in Pakistan, revealing that top management support *mediates* the relationship between external pressures and sustainable procurement practices, with insignificant direct effects but strong indirect effects via leadership and

collaboration. This study's methodological rigour, including parallel mediation testing across four models, provides robust evidence of top management's facilitative role. However, limitations such as reliance on survey data without longitudinal elements fail to capture long-term dynamics, and the focus on sustainability overlooks core APP efficiency metrics, such as timelines. A debate emerges here: Bhutto's findings contradict Nzunda's direct positive effects, suggesting context-specificity (e.g., external pressures in developing economies). Regarding e-procurement moderation, the study implies that digital systems amplify top management's influence by enabling real-time collaboration, but it lacks explicit testing to determine whether e-procurement could moderate mediation paths by improving perceived usefulness under TAM, potentially resolving contradictions in low-adoption settings like Tanzania.

Jayeola et al. (2022) utilised partial least squares SEM (PLS-SEM) on 204 Malaysian SMEs, finding that top management support partially mediates (and moderates at low levels) the relationship between APP implementation and financial performance. The methodology's strength is its mediation-moderation analysis, which addresses causality more effectively than simple regression, but its limitations include a focus on SMEs rather than public entities, potentially underestimating institutional constraints in LGAs. This contrasts with Bhutto's indirect effects, highlighting a debate on direct vs. mediated influences: Jayeola suggests stronger effects in resource-constrained environments, yet both overlook e-procurement's role. Critically, e-procurement could moderate these effects by easing implementation burdens if perceived as useful; it strengthens low-level management support; otherwise, it weakens it, as seen in Tanzanian LGAs with low NeST adoption.

Kagoya and Mbamba (2020) applied PLS-SEM to 277 Ugandan ministry employees and found that top management support positively *moderates* the relationships among user participation, information system attributes, and e-government success. The mixed-methods foundation (surveys informed by Stakeholder and Information Success theories) adds depth, but the cross-sectional design limits causal inference, and self-reported data may overstate support levels. This study directly addresses e-procurement moderation, revealing a positive effect on implementation success ($p < 0.05$) but contradicting Jayeola by emphasising the importance of high-support contexts. Limitations include Uganda-specific findings that may not transfer to Tanzania's NeST

challenges. The debate here centres on the direction of moderation: while Kagoya posits amplification, low digital literacy could reverse it, as e-procurement's perceived ease of use (TAM) mediates the support-implementation link.

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Overall, scholarly works agree on the positive impact of legal frameworks, but they continue to dispute the effectiveness of enforcement due to differing views. Moreover, the research still has some methodological gaps (e.g., non-longitudinal studies) and a limited focus on e-procurement. Moderation greatly enhances APP success through TAM in high-adoption contexts like Tanzania, but in low-adoption contexts like Tanzania, it decreases. Future research should examine interactions longitudinally in LGAs and develop solutions to these problems.

2.3.3 The influence of stakeholders' engagement on effective implementation of the APP

A study by Kasanga *et al.* (2023) assessed the role of stakeholder engagement in the implementation of procurement plans in the Ilemela district. Adopting a cross-sectional survey design, they gathered data from 220 procurement practitioners across different districts. The findings indicated that involving stakeholders, such as local businesses and community representatives, in the procurement planning process led to more realistic and achievable procurement plans. However, the study did not specifically focus on the unique challenges faced by the Moshi Municipality. The current research seeks to fill this gap by assessing the specific stakeholder engagement determinants that influence the effective preparation and implementation of annual procurement plans in the Moshi Municipality, and by providing tailored recommendations to enhance procurement efficiency in this locale.

Brown and Martin (2023) conducted a study titled Stakeholder Engagement in Sydney Public Organisation Procurement Planning. Utilising a qualitative research design, they conducted semi-structured interviews with procurement officials and community representatives across five municipalities. The study found that proactive engagement with local businesses and community stakeholders during the procurement planning phase led to increased transparency and Trust in local government operations. This concluded that stakeholder engagement has a strong influence on the effective implementation of the APP in LGAs. However, the research did not examine the challenges of engaging indigenous communities in procurement processes. The current study aims to fill this gap by assessing the influence of indigenous stakeholder involvement on the effectiveness of procurement plan implementation.

A study by Mkhize and Dlamini (2024) examined the impact of stakeholder participation on public procurement planning in Cape Town, South Africa. Through a mixed-methods approach, they surveyed 150 procurement officials and conducted focus group discussions with community leaders in various municipalities. Findings indicated that inclusive stakeholder participation, particularly involving local suppliers and civil society organisations, enhanced alignment between procurement plans and community needs and market realities. Nonetheless, the study did not consider the potential conflicts arising from diverse stakeholder interests. The current research seeks

to address this by evaluating strategies for managing conflicts of interest to improve the execution of procurement plans.

Changalima (2022) examined the influence of procurement planning on the effectiveness of public procurement, drawing on experiences from selected public procuring entities in Dodoma city, Tanzania. A cross-sectional design was adopted, from which data were collected from 146 respondents purposively selected from several public procurement entities located in Dodoma city, United Republic of Tanzania, using a structured survey questionnaire, and analysed using a binary logistic regression model. Findings revealed that procurement planning as a strategic function significantly influences the effectiveness of public procurement. The binary logistic regression model included the implementation of prepared procurement plans ($p = 0.039$), the involvement of users as stakeholders and important institutional actors in public procurement ($p = 0.033$), compliance to procurement laws and regulations when planning ($p = 0.016$) and adequacy of budget ($p = 0.042$) as predictors of procurement planning were tested to be significantly related to the effectiveness of public procurement. It was concluded that public procurement entities can achieve procurement effectiveness through planning. This recommends that stakeholders be engaged in APP implementation to ensure effective public procurement.

Orina (2015) revealed that APP implementation cannot succeed without attention to codes of ethics and collaboration with key stakeholders, which, in turn, improves the organisation's flexibility. Teamwork spirit among the PPI team enhances performance through smooth coordination and information sharing. All stakeholders must adhere to the organisation's standards and uphold its core values: accountability, teamwork, professionalism, responsiveness, and integrity. A study by Vonderembese (2019) argues that organisations have begun to realise that improving internal efficiencies is no longer enough; instead, the entire procurement environment must be made more competitive. Under such circumstances, effective procurement management has become a potentially effective means to improve organisational performance.

A study by Labulunye (2024) examined factors influencing the procurement process in public organisations, focusing on the Katavi Regional Office in Tanzania. The research objectives included examining procurement practices, assessing supplier selection

procedures, and identifying challenges hindering the procurement process. This study adopted a case study design, and data were collected from 80 respondents via a questionnaire. Descriptive analysis was employed to analyse the data. The findings highlighted the council's strong emphasis on compliance with regulations, including strict adherence to legal requirements and regular use of competitive bidding processes. However, there are opportunities to improve stakeholders' engagement and understanding in these processes. The study also identifies effective quality assurance and contract management practices, indicating a commitment to supplier accountability. While budgetary controls are stringent, there is room for improvement in control mechanisms. Stakeholder engagement is recognised as essential, but there are opportunities to enhance communication and collaboration. Challenges include limited procurement staff capacity, inadequate infrastructure and technology, budget constraints, procurement fraud and corruption, supplier capacity issues, regulatory compliance, and stakeholder engagement. These findings contribute to the understanding of procurement processes in public organisations, particularly within the context of the Katavi Regional Office. The results can inform policymakers and organisational leaders in enhancing procurement practices, optimising supplier selection procedures, and addressing challenges to improve the overall effectiveness of APP. This research serves as a foundation for future studies and initiatives aimed at enhancing the effective implementation of APP in public organisations.

While the literature unanimously posits that stakeholder engagement positively influences APP effectiveness, a critical analysis reveals a fragmented understanding. There is a contradiction between viewing engagement as a technical versus a governance tool, and a significant gap remains in managing the conflicts that engagement can reveal. Most critically, the moderating role of the e-procurement system is virtually absent from this discourse. The transition to digital platforms like NeST fundamentally alters the channels, speed, and inclusivity of stakeholder interaction. Therefore, this study not only analysed the influence of stakeholders' engagement but also critically examined how the e-procurement system moderates this relationship, testing whether digitalisation strengthens the link between engagement and effective APP implementation in Moshi Municipality.

2.3.4 The influence of the e-procurement system as a moderate effect on the effective implementation of the APP

Siti *et al.* (2020) found that, to combat corruption, the Indonesian government has designated e-procurement as one of the seven flagship programs of the National Information Technology Council. One very successful developer of an e-procurement system is the Public Procurement Policy Institution, or Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (LKPP), which serves 731 government agencies and 333,452 suppliers. This study was conducted to analyse the determinants of e-procurement system success and its impact on perceived transparency from the supplier's perspective. This study answers both questions by applying a covariance-based structural equation modelling approach to analyse the survey data of 157 respondents. This study finds that only system quality, service quality, regulation, Trust, user satisfaction, and perceived benefits determine an e-procurement system's success. However, only Trust in an e-procurement system predominantly affects perceived transparency.

Jovinus (2021), the effective use of NeST in conducting procurement by procuring entities at TANAPA in Arusha. The study used a descriptive research design and employed a concurrent mixed-methods approach. Data were collected through a questionnaire from a sample of 84 respondents drawn from TANAPA staff at its Headquarters in Arusha and from Tarangire and Arusha National Parks. The study used both probability and non-probability sampling methods. The findings revealed that the effective use of NeST in procurement is affected by data management, data security, information transparency, accountability, staff competence, financial resources, and effective communication. Data management has the greatest effect on NeST in conducting procurement, followed by data security and information transparency. The regression model revealed a significant relationship between data management, data security, information transparency, accountability, staff competence, financial resources and effective communication with the effectiveness of NeST in conducting procurement. It was concluded that data management, data security, information transparency, accountability, staff competence, financial resources, and effective communication significantly affect NeST's effectiveness in conducting procurement at TANAPA. Procuring entities should provide periodic staff training for personnel involved in procurements and allocate sufficient financial resources to ensure that all

necessary infrastructure and systems are upgraded as required to enable effective use of NeST in conducting procurements.

Johnson *et al.* (2020) conducted a study on the impact of digital procurement tools on municipal procurement efficiency using a quantitative cross-sectional survey design with 200 procurement managers from various municipalities. The findings revealed that e-procurement systems, specifically e-sourcing and e-tendering, enhanced transparency, reduced processing times, and boosted supplier competitiveness, yet they did not examine the integration of additional functionalities such as e-invoicing and e-cataloguing. The current study will build on this research by assessing how a comprehensive, integrated e-procurement platform influences the effective implementation of APP in LGAs.

A study by Okafor and Adebayo (2021) on the role of the e-procurement system in digital transformation in public procurement in Lagos, Nigeria, employed a mixed-methods approach involving surveys and in-depth interviews with 150 procurement officials across several states. It was demonstrated that e-tendering and e-auctions improved bid transparency and reduced corruption. This concluded that e-tendering and e-auctions had a positive impact on public procurement in Nigeria. However, the study did not fully explore the impact of e-ordering and e-invoicing functionalities. The current study will address this gap by examining the overall effectiveness of various e-procurement modules in enhancing the implementation of APP in LGAs settings.

Odhiambo *et al.* (2020) assessed the effects of e-procurement plan implementation practices on the implementation of APP of County Governments in Kenya. The specific objectives were to analyse the effects of resource allocation and the contributions of the procurement method to the performance of Kisii County Government, Kenya. This study focused on implementation theory and the Resource-based view. The study adopted a descriptive survey research design. The study population comprised 4935 employees of Kisii County Government. Yamane's formula was used to calculate the sample size for the study ($n = 370$ respondents). Questionnaires were used to collect primary data. The collected data was analysed using a quantitative technique. The collected data were analysed using descriptive statistical measures of central tendency, such as the mean and percentages. It was found that the county has sufficiently trained

personnel to support the implementation of the e-procurement plan. The county allocates sufficient financial resources to implement the e-procurement plan. The disbursement of budgeted funds was delayed due to the delayed implementation. Using other variable changes would result in this regression equation, established that keeping all factors constant, resource allocation, and e-procurement system, while other factors affected performance and would be varied by implementations. The county adheres to e-procurement procedures during the implementation of the procurement plan.

Simatupan (2021) studied the effect of e-procurement methods on the performance of companies' APP in India. The study aimed to examine the effect of procurement methods on companies' performance. The study employed a descriptive research design. It included a sample of 22 companies, with the questionnaire distributed to 22 respondents. Descriptive statistics were conducted to describe the data. There was an association between e-procurement methods and firm performance. Thus, an e-procurement system enhances supply chain performance by ensuring the effective supply of goods and services.

Simchi and Kaminsky (2021) studied the effects of an e-procurement system and the implementation of an APP in Ethiopian public organisations. The study aimed to establish the effect of an e-procurement system on firm performance and on the design and management of the supply chain. The study analysed supplier procurement methods in 4 public health organisations. The study analysed e-procurement across 4 organisations, using 345 respondents comprising employees from those organisations. Panel data design using simple and multiple regression analysis was employed. The study indicated that the e-procurement system between suppliers and buyers was statistically significant. Thus, the e-procurement system was important for procurement practices regarding stock levels, costs, knowledge, and returns.

Hallikas and Vilko (2021) examined the impact of an e-procurement system on the implementation of APP in Uganda-listed firms. The study adopted a case study approach to analyse 5 listed firms in Uganda. The study also used 5 years of data from 2011 to 2015; it employed a pooled regression design (Panel data design). The results showed that the e-procurement system and firm performance were significantly related. The comprehensive procurement report showed that the e-procurement system affected

performance. This study aimed to bridge the gap in Trust, supplier-provided e-procurement methods, supplier responses, and information requests.

Manyuru (2021) studied the effect of an e-procurement system on the relationship between corporate governance and the implementation of APP among Uganda-listed firms. The objective of the study was to examine the effects of the e-procurement system and corporate governance on Uganda-listed firms. The study adopted a survey design, and a stratified sampling technique was used to determine a sample size of 34 respondents. Descriptive statistics were used. The study indicated that procurement methods inform corporate governance, and the production of goods and services exhibits the reasonability of the supply chain. The e-procurement system improved the firm's requisition process, thereby boosting performance.

Otieno and Getuno (2017) examined the effect of an e-procurement system on the implementation of APP in the postal corporation. The study aimed to examine the effects of procurement methods on regulation. The census was used to sample 6 management employees. A descriptive research design was used with 76 procurement employees. Questionnaires were distributed via self-administration. Using Pearson's correlation, there was a positive association between transparency, inspection, procurement reforms, tendering, and professionalism and organisational performance. However, the study failed to address procurement methods using parametric analysis of the procurement of goods and services. According to PPADA (2015), several e-procurement systems may be used; however, this depends on the threshold matrix based on the value of goods, works, or services to be acquired by the procuring entity. Some cost-effective, transparent, and fair procurement methods that lead to proper accountability and thus value for money include open tender, request for proposal, and restricted tendering, in which the procuring entity deals only with pre-qualified suppliers. All these methods are focused on the effective implementation of the procurement plan.

The literature confirms that e-procurement systems are influential, but a critical analysis reveals that their role as a *moderating variable* is implicit and under-theorised. A major gap is the lack of studies that explicitly model and test e-procurement as a moderator, altering the strength of the relationships among key determinants, including management support, legal framework, and stakeholder engagement. And APP

implementation outcomes. Therefore, this study directly addressed this gap by thoroughly examining its moderating effect on the other determinants of effective APP implementation in Moshi Municipality.

2.4 Conceptual Framework

The conceptual framework of this study is developed from theoretical and empirical literature that highlights the relationship between procurement determinants and the effective implementation of the Annual Procurement Plan (APP). The framework is anchored on the assumption that the success of APP in Local Government Authorities depends on the interplay of managerial, legal, institutional, and technological factors. This is further illustrated in Figure 2.1

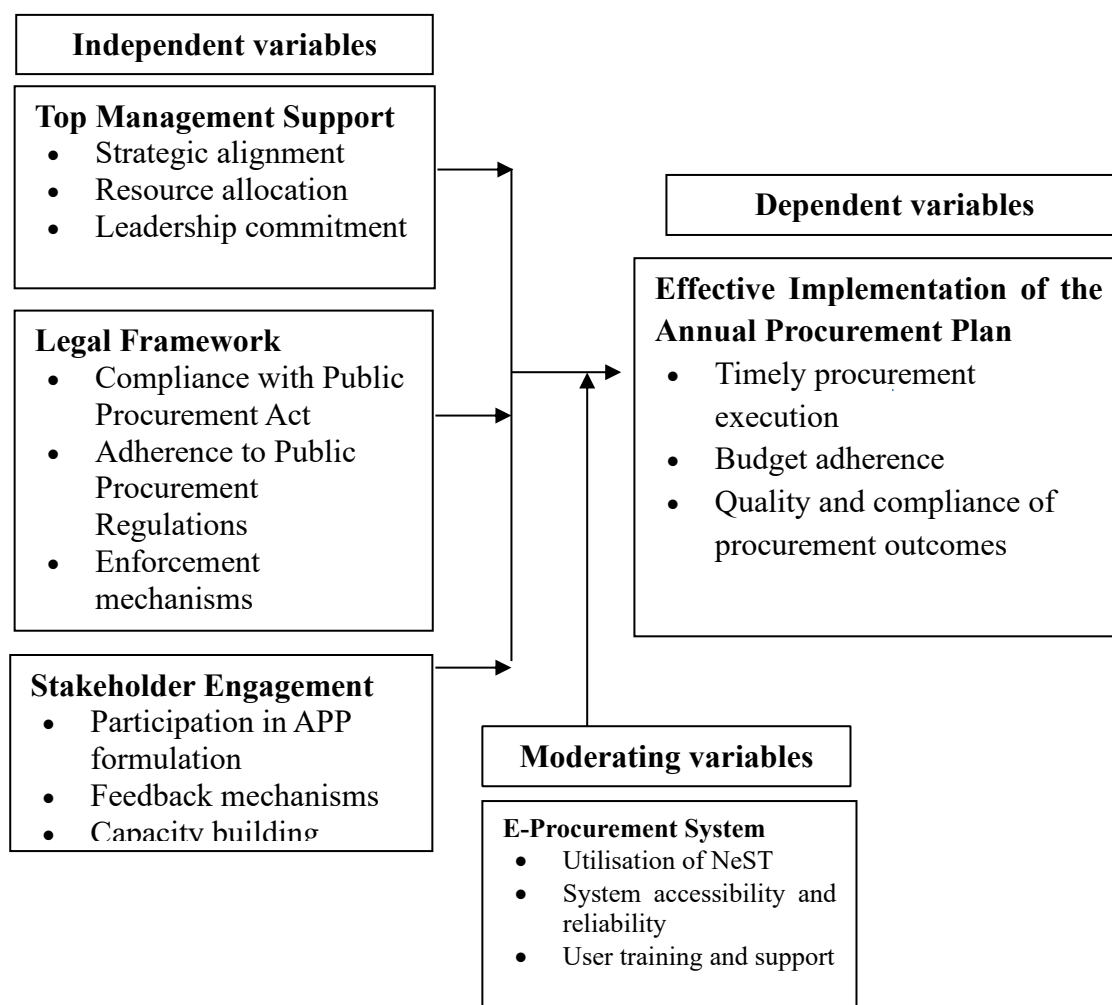


Figure 2.1: The relationship between procurement determinants and the effective implementation of the Annual Procurement Plan (APP)

The framework assumes that effective APP implementation depends on the organisation's ability to mobilise and leverage internal resources, such as leadership commitment, legal compliance mechanisms, and stakeholder collaboration, to achieve procurement efficiency and accountability. Top Management Support (H₁), Legal Framework (H₂), and Stakeholders' Engagement (H₃) are hypothesised to have positive, significant effects on the effective implementation of the APP. Top management provides strategic leadership and resource allocation; the legal framework enforces compliance and transparency; and stakeholder engagement fosters inclusivity and shared responsibility in procurement planning and execution.

Building on the TAM, the E-Procurement System (H₄) is conceptualised as a moderating variable that strengthens or weakens the relationships between these determinants and APP implementation. The model posits that when the e-procurement system, particularly the National e-Procurement System (NeST), is perceived as useful and easy to use, it enhances efficiency, data accuracy, and transparency, thereby amplifying the effects of management support, legal compliance, and stakeholder participation. Conversely, low adoption or technical challenges may weaken these relationships, resulting in poor APP execution. Thus, the framework integrates organisational resources and technological acceptance to provide a comprehensive explanation of how managerial, institutional, and digital factors jointly influence procurement performance in Local Government Authorities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This study adopted a cross-sectional research design with a quantitative orientation supported by qualitative inputs, implemented through a convergent parallel mixed-methods approach. In this design, quantitative data from surveys and qualitative data from interviews and documents were collected simultaneously, analysed independently, and then converged during interpretation to triangulate findings and provide a more robust understanding of the determinants influencing APP implementation. The design focuses on collecting data at a single point in time from a defined population to describe relationships among variables such as top management support, legal framework, stakeholder engagement, e-procurement system, and APP implementation.

Quantitative data were gathered via structured questionnaires for statistical analysis, while qualitative data were obtained through semi-structured interviews and documentary reviews for thematic insights. The convergent parallel model ensured that both strands were weighted equally, with quantitative results providing generalisable patterns and qualitative data offering contextual depth. A cross-sectional design was chosen because it is efficient, cost-effective, and suitable for examining associations between variables in a real-world setting without manipulating conditions, aligning with the study's aim to assess current determinants in Moshi Municipality.

3.2 Geographical Coverage

The study was conducted in Moshi Municipality, located in Kilimanjaro Region, northern Tanzania. Moshi Municipality serves as a representative urban LGA with a mix of administrative, educational, and developmental activities. Data were collected from three procuring entities: Moshi Municipal Council (MMC), Moshi District Council (MDC), and Moshi Co-operative University (MoCU). Moshi Municipality was purposively selected as the study area because it exemplifies a typical Tanzanian LGA mandated to implement procurement reforms, including APP and NeST, while facing common challenges like delays, cost overruns, and low digital adoption. It offers socio-economic relevance as a hub for tourism, education, and agriculture, where efficient procurement directly impacts development. Only three PEs were chosen to allow focused, in-depth analysis within resource limits. MMC and MDC represent local

government councils with urban and rural variants for comparison, while MoCU adds an educational/institutional perspective, ensuring diversity without overwhelming the scope. This selection enhances relevance and feasibility, with findings potentially generalisable to similar LGAs through analytical generalisation, though not statistically to all Tanzanian LGAs due to contextual variations.

3.3 Population, Sample and Sampling Strategies

3.3.1 Study Population

The study population comprised all staff involved in procurement-related activities within MMC, MDC, and MoCU, including members of the Procurement Management Unit (PMU), Tender Board, User Departments, and Finance Section. These groups were targeted due to their direct roles in APP preparation, approval, and execution. The total staff population was 265, based on 2024 institutional records. The population focuses on key procurement actors to ensure relevance. Population data were verified from departmental listings. Limiting the examination to these institutions and roles ensures a focused examination of APP determinants in a public-sector context, aligning with the study's objectives.

3.3.2 Sample size

The study used a sample size of 159 respondents, drawn from different categories of staff directly engaged in procurement activities. These included members of the Procurement Management Unit (PMU), the Tender Board (TB), the Finance Department, and staff from various User Departments (UDs). The inclusion of these groups was based on their respective roles in initiating needs, preparing procurement plans, making decisions, and evaluating procurement performance. This ensured that the sample captured a comprehensive range of perspectives relevant to the implementation of the Annual Procurement Plan (APP). The sample size was determined using Yamane's (1967) formula for finite populations, applying a 95% confidence level and a 5% margin of error. The formula is expressed as:

$$n = \frac{N}{1 + N(e)^2}$$

Where n = number of sample size, N = population under study (265) who were employees from selected study areas and e = standard error (5%)

$$n = \frac{265}{1 + 265(0.05)^2}$$

$$n = \frac{265}{1.6625}$$

$n = 159$ respondents

Thus, the study sample comprised 159 respondents, proportionally distributed as shown in Table 3.1 below.

Table 3. 1: Sample Distribution

Category	Population	Sample Size	Sampling Technique
Procurement Management Unit (PMU)	20	12	Purposive
Tender Board	15	09	Purposive
Finance Department	25	15	Purposive
User Departments	205	123	Simple Random
Total	265	159	

3.3.3 Sampling procedures

This study employed both purposive sampling and simple random sampling techniques to ensure that the selected participants provided data that was both relevant and representative of the study population. The combination of these two techniques was considered appropriate because the study involved respondents across different categories with varying levels of knowledge, roles, and experience in procurement processes within Moshi Municipality.

Purposive sampling was used to select key informants, including officials from the Municipal Procurement Management Unit (PMU), members of the Tender Board, department heads, and the Internal Auditor. These participants were deliberately chosen because they possess in-depth knowledge, direct involvement, and decision-making responsibilities in the preparation, approval, and implementation of the Annual Procurement Plan (APP). Their inclusion was therefore justified by their expertise and experience in public procurement management. The criteria for selecting these key informants included at least 3 years of experience in procurement-related roles, direct participation in the APP preparation or execution process, and professional familiarity with the National e-Procurement System (NeST). This ensured that only individuals

capable of providing accurate and informed insights into procurement practices were included, thereby minimising selection bias.

On the other hand, simple random sampling was applied to select respondents from among non-managerial staff and ordinary employees within departments that implement procurement activities. This method was appropriate because it gave all potential participants an equal chance of being selected, reducing bias and enhancing the sample's representativeness. By randomly selecting respondents from departmental staff lists, the study ensured diversity in views while maintaining objectivity. The combination of purposive and random sampling techniques thus enabled the study to capture both expert perspectives from key decision-makers and general perceptions from operational-level employees, providing a comprehensive understanding of the determinants influencing the effective implementation of the APP in Moshi Municipality.

3.4 Types and Sources of Data

The study relied on two major data types: primary and secondary. Primary data were collected directly from respondents within the Moshi Municipal Council who are actively involved in procurement functions. This type of data was particularly valuable because it provided first-hand insights into the influence of top management support, the legal framework, stakeholder engagement, and e-procurement on the implementation of the Annual Procurement Plan (APP). Questionnaires were administered to staff from user departments, finance, the Procurement Management Unit, and the Tender Board. Also, key informant interviews were conducted with senior officers to capture more detailed perspectives on challenges and best practices in APP implementation. Collecting primary data in this way ensured that the study met its objectives with up-to-date, context-specific evidence. Secondary data were obtained from documentary sources related to procurement planning and implementation at both national and local government levels.

3.5 Data Collection Methods

The study employed a combination of questionnaires, interviews, and documentary reviews to gather both primary and secondary data.

3.5.1 Questionnaires

A survey questionnaire was administered to 159 staff across three institutions within Moshi Municipality: Moshi District Council (54), Moshi Co-operative University (29), and Moshi Municipal Council (76). The questionnaire was divided into four main sections: Section A covered demographic information; Section B focused on independent variables (top management support, legal framework, and stakeholder engagement); Section C examined the moderating variable (e-procurement system); and Section D addressed the dependent variable (effective implementation of the APP). Each construct was measured using a five-point Likert scale ranging from *1 = Strongly Disagree* to *5 = Strongly Agree*. The items were developed based on previous empirical studies and adapted to suit the Tanzanian public procurement context. In this study, the questionnaire method was necessary due to time constraints and the limited number of available respondents. It enabled efficient data collection from a large number of participants within a short period (Appendix 1).

3.5.2 Interview

Interviews were conducted with 12 key informants selected from the three institutions involved in the study: Moshi District Council, Moshi Co-operative University (MoCU), and Moshi Municipal Council. The interview guide consisted of open-ended questions focusing on policy implementation challenges, managerial support, legal compliance, stakeholder coordination, and the moderating role of the e-procurement system (NeST). Interviews were conducted face-to-face at participants' offices to ensure convenience and confidentiality. Each session lasted 30-45 minutes and was recorded with the participant's consent. The researcher also took brief notes to capture non-verbal cues and contextual observations. Prior to data collection, the interview guide was reviewed by two procurement experts and a research supervisor to ensure content validity and alignment with study objectives. The combination of structured questionnaires and flexible interviews enhanced the breadth and depth of the collected data. This method was particularly suitable for obtaining first-hand insights into sensitive issues such as compliance gaps, managerial commitment, and resistance to e-procurement systems. It also provided a deeper understanding of the determinants influencing effective APP implementation in the study area (Appendix 2).

3.5.3 Documentary review

Documentary review was used to obtain secondary data from official reports, policy documents, and relevant records within the Municipal Council. The reviewed documents included the Annual Procurement Plans (2020–2024), the Public Procurement Act No. 10 of 2023, PPRA audit reports, council budget reports, and e-procurement system performance summaries. These documents were analysed to corroborate information obtained from questionnaires and interviews, and to provide historical and policy-based perspectives on APP implementation practices. The reviewed information included the number of procurement items and suppliers in the study area (Appendix 3).

3.6 Data Validity and Reliability

Ensuring the validity and reliability of research instruments is critical to the credibility and rigour of any empirical study. This section outlines the procedures undertaken to establish the accuracy, consistency, and trustworthiness of the data collection tools used in this study.

3.6.1 Validity of data

Validity refers to the extent to which a research instrument measures what it is intended to measure (Serakan & Bougie, 2016). To enhance content validity, the questionnaire was reviewed by academic supervisors and experienced researchers in procurement and public sector evaluation. Their feedback informed revisions to item phrasing, construct alignment, and response scaling. Also, a pilot test was conducted involving 20 respondents from the Rombo District Council, who were not part of the main study sample.

The study ensured content, construct, and criterion validity for quantitative instruments, and credibility, dependability, and confirmability for qualitative data. The questionnaire and interview guide were reviewed by two procurement experts and a university supervisor to ensure that the items adequately covered the study objectives and reflected relevant dimensions of the variables. Necessary adjustments were made based on their feedback. The questionnaire items were compared with existing empirical instruments used in similar procurement studies in Tanzania and other countries to ensure alignment and accuracy. The validation process ensured that the

instrument was conceptually sound and contextually appropriate for assessing the effective implementation of the Annual Procurement Plan (APP) in Moshi Municipality. Moreover, all interviews were recorded and transcribed verbatim to ensure accuracy and transparency, while documentary evidence was carefully cross-checked with primary data to ensure consistency.

3.6.2 Reliability of data

Reliability refers to an instrument's consistency in producing similar results when repeated under comparable conditions. To test the internal consistency of the questionnaire, Cronbach's Alpha coefficients were computed for each construct after the pilot study involving 20 respondents from Rombo District Council, who were not part of the main study sample. According to Kothari (2019), a coefficient of 0.7 and above indicates acceptable reliability. The results yielded a Cronbach's Alpha coefficient of 0.97, confirming that the questionnaire items were internally consistent and suitable for data collection. In addition, the pilot study results were reviewed to ensure that all items measured the intended constructs and that respondents interpreted the questions consistently. The results of the reliability test are presented below:

Table 3. 2: Reliability Test Results

Construct	Number of Items	Cronbach's Alpha (α)	Interpretation
Top Management Support	4	0.97	Reliable
Legal Framework	4	0.98	Reliable
Stakeholders' Engagement	4	0.97	Reliable
E-Procurement System (Moderator)	4	0.98	Reliable
Effective Implementation of APP	4	0.97	Reliable
Overall	20	0.97	Reliable

Source: Field Data, 2025

3.7 Measurement of Study Variables

This section outlines how the study's key variables were operationalised and measured. The study employed structured questionnaires with behaviourally anchored items to capture perceptions of the implementation of the Annual Procurement Plan (APP). Each variable was broken down into measurable indicators aligned with the study's conceptual framework.

Table 3. 3: Matrix showing measurements of variables

Variable	Indicators	Measurement Method	Analytical Approach
Top Management Support	• Strategic alignment • Resource allocation • Leadership commitment	Likert scale	Descriptive Statistics and Multiple Linear Regression
Legal Framework	• Compliance with Public Procurement Act • Adherence to Procurement Regulations • Enforcement mechanisms	Likert scale	Descriptive Statistics and Multiple Linear Regression
Stakeholders' Engagement	• Participation in APP formulation • Feedback mechanisms • Capacity building	Likert scale	Descriptive Statistics and Multiple Linear Regression
E-Procurement System	• Utilisation of NeST • System accessibility and reliability • User training and support	Likert scale	Descriptive Statistics, Regression, and Moderated Regression
Effective Implementation of APP (Dependent Variable)	• Timely procurement execution • Budget adherence • Quality and compliance of procurement outcomes	Likert scale	Descriptive statistics and Regression analysis

3.8 Data Analysis Techniques

This section presents the techniques used to analyse both quantitative and qualitative data collected during the study. The analysis was guided by the research objectives, the type of data collected, and the study's conceptual framework. The supervisor emphasised the need to show how each objective was analysed separately and to justify the analytical methods used. Accordingly, the study employed a combination of descriptive statistics, inferential analysis, and contextual analysis to ensure methodological rigour and alignment with its mixed-methods approach.

3.8.1 Quantitative data analysis

Quantitative data were analysed using the Statistical Package for Social Sciences (SPSS), version 27. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise responses and identify patterns across the key variables. These descriptive outputs provided an overview of respondents' perceptions regarding top management support, legal framework, stakeholder engagement, and e-procurement system usage.

To address the study's specific objectives, inferential statistics were employed. Each objective was analysed independently using Multiple Linear Regression Analysis (MLRA) to determine the strength and significance of relationships between

independent variables and the dependent variable, the effective implementation of the Annual Procurement Plan (APP). The regression model was specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

- Y Effective implementation of APP
- X_1 = Top Management Support
- X_2 = Legal Framework
- X_3 Stakeholders' Engagement
- X_4 = E-Procurement System
- β_0 = Constant
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Regression coefficients
- ε = Error term

To test the moderating effect of the e-procurement system, Moderated Multiple Regression (MMR) was conducted. Interaction terms were created between e-procurement and each predictor variable to assess whether the presence of digital systems strengthened or weakened the relationship between APP formulation and its implementation. The moderation model was specified as:

$$Y = \beta_0 + \beta_1 X + \beta_2 M + \beta_3 (X \times M) + \varepsilon$$

Where:

- X = Independent variable
- M Moderator (E-Procurement System)
- $X \times M$ = Interaction term

3.8.2 Qualitative Data Analysis

Qualitative data obtained from interviews and documentary reviews were analysed using contextual analysis. This approach enabled the researcher to interpret responses within the institutional, regulatory, and operational environment of Moshi Municipality. Transcripts and documents were examined holistically to understand how organisational culture, legal frameworks, stakeholder dynamics, and technological infrastructure influenced the implementation of the Annual Procurement Plan (APP). The analysis focused on situational meaning and institutional context rather than isolated themes, allowing for deeper information into contradictions, constraints, and

enabling factors. Triangulation with quantitative findings enhanced the credibility of interpretations and supported the formulation of context-specific recommendations.

3.9 Ethical Considerations

This study was conducted in full compliance with the ethical standards of academic research. Before data collection, the researcher sought official permission from the targeted institutions to access staff involved in procurement. Respondents were provided with clear information about the study's purpose, objectives, and how the data would be used. Participation was strictly voluntary, and respondents were assured they could withdraw from the study at any time without consequences. Written or verbal consent was obtained from all participants before administering questionnaires or conducting interviews.

To ensure confidentiality, no personal identifiers such as names or job titles were disclosed in the study report. The collected data were used solely for academic purposes and stored securely to prevent unauthorised access. Furthermore, care was taken to frame questions neutrally to avoid discomfort for respondents. By adhering to these principles of voluntary participation, informed consent, and confidentiality, the study safeguarded the rights, dignity, and privacy of all participants throughout the research process.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Overview

This chapter presents and discusses the study's findings, based on data collected from Moshi Municipality through questionnaires, interviews, and documentary reviews. The analysis is organised according to the study's specific objectives, focusing on the influence of top management support, legal framework, stakeholders' engagement, and the e-procurement system on the effective implementation of the Annual Procurement Plan (APP). Quantitative data are analysed using descriptive and inferential statistics, while qualitative data are interpreted through contextual analysis to capture institutional realities and implementation dynamics. The findings are discussed in relation to the conceptual framework and existing literature, highlighting areas of convergence, divergence, and practical implications.

4.2 Response Rate

A total of 159 questionnaires were distributed to procurement officers, planning staff, and other relevant stakeholders within Moshi District Council, Moshi Co-operative University (MoCU), and Moshi Municipal Council. Of these, 136 were properly completed and returned, yielding a response rate of 85.5%. This response rate was considered adequate and reliable for analysis, aligning with general recommendations for minimising non-response bias in survey research (Kothari, 2014). This high response rate was attributed to the researcher's close follow-up, institutional cooperation, and the study's relevance to respondents' professional responsibilities. The returned questionnaires provided sufficient data for quantitative analysis and were complemented by qualitative insights obtained through interviews and documentary reviews.

4.3 Demographic Characteristics of the Respondents

This section presents the demographic profile of the respondents who participated in the study. Understanding respondents' backgrounds is essential for interpreting the findings in the context of their professional experience, educational qualifications, and institutional roles. Understanding respondents' demographic characteristics is essential for linking the study's findings and assessing the credibility of the collected data.

Variables such as education level and years of experience help to establish the diversity, expertise, and representativeness of the sample as summarised in Table 4.1

Table 4. 1: Demographic characteristics of respondents (n=136)

Demographic	Statement	Frequency	Percentage
Education Level	Certificate	0	0.0
	Diploma	9	6.6
	Bachelor's Degree	41	30.1
	Postgraduate	70	51.5
	Professional Qualification	16	11.8
Years of Experience	Less than 2 years	19	14.0
	2-5 years	32	23.5
	6-10 years	50	36.8
	More than 10 years	35	25.7

Source: Field Data, 2025

4.3.1 Education Level of Respondents

It was significant to determine respondents' education levels to assess whether they were well-equipped with the knowledge and skills required for procurement procedures. The findings indicate that 0.0% were Certificate holders, 6.6% were Diploma holders, 30.1% were Bachelor's Degree holders, 51.5% were holders of Postgraduate qualifications, and 11.8% were holders of Professional Qualifications. The respondents' education levels showed that the majority had at least an undergraduate qualification, reflecting the fact that employment requirements initially demanded that level of education. The respondents' educational backgrounds were summarised in Table 4.1.

4.3.2 Years of Experience in Procurement

It was necessary to determine respondents' years of procurement experience to assess their practical experience with APP implementation. The findings show that 14.0% had less than 2 years of experience, 23.5% had 2–5 years, 36.8% had 6–10 years, and 25.7% had more than 10 years. This implies that the majority of respondents had substantial experience in procurement, enhancing the reliability and depth of the information provided. Respondents' experience levels were summarised in Table 4.1.

4.4 Influence of Top Management Support on the Effective Implementation of the Annual Procurement Plan

This section presents and discusses the findings related to the first objective of the study, which aimed to assess the influence of top management support on the effective

implementation of the Annual Procurement Plan (APP) in Moshi Municipality. Top management support is considered a critical institutional factor that affects how procurement plans are formulated, executed, and monitored. The analysis draws from both quantitative and qualitative data to examine how managerial commitment, resource allocation, and strategic oversight contribute to procurement performance, while also exploring the potential moderating role of the e-procurement system.

4.4.1 Descriptive Analysis of top management support on the effective implementation of the annual procurement plan

Descriptive statistics provide an initial overview of respondents' perceptions, revealing generally positive views on top management support, but with notable neutral responses that suggest underlying barriers. Table 4.4 summarises the Likert-scale responses (SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree).

The findings in Table 4.4 revealed that 40.4% of respondents strongly agreed, 30.1% agreed, 25.0% were neutral, and 4.4% disagreed with the statement that top management is committed to APP implementation (mean = 4.05, SD = 0.92). This indicates a high level of overall perceived commitment, aligning with RBT's emphasis on leadership as a core resource for organisational performance. However, the 25.0% neutral responses were unexpected, potentially signalling apathy or inconsistent visibility of commitment across departments, contradicting assumptions of uniform managerial involvement in resource-constrained LGAs. As one key informant from MMC explained:

"...of course we have our internal controls which remind us of the sidestepped issues before, during and after procurement contract, which are capable enough and well informed. They usually raise several issues during evaluation meetings, stemming from low procurement awareness among administrators and political figures who often issue orders... Sometimes we had goods or services provided through their orders, then the issues of compliance with rules, regulations and procedures are left to practitioners to retrospect!" Key Informant, Moshi Municipal Council, June 2025

This qualitative data shows the practical implications in contexts such as Moshi Municipality, where procurement accounts for a significant portion of public expenditure (URT, 2025). Inconsistent commitment could perpetuate delays and cost overruns, as reported by PPRA (2023), which found that only 9.3% of audited entities achieved satisfactory compliance.

The results in Table 4.4 also show that 41.9% of respondents strongly agreed, 28.7% agreed, 25.0% were neutral, and 4.4% disagreed with the statement that top management aligns APP with organisational goals (mean = 4.07, SD = 0.93). This reflects strong strategic integration, supporting RBT's view that alignment leverages resources for competitive advantage. However, the neutral responses (25.0%) highlight an unexpected divergence: while literature like Nzunda (2024) reports direct positive effects of strategic leadership on compliance ($\beta = 0.619$, $p < 0.001$), this study's findings suggest contextual barriers in Tanzanian LGAs, such as competing priorities (e.g., tourism vs. education in Moshi; Masoud et al., 2023). Comparatively, Bhutto and Shaikh (2023) found insignificant direct effects in Pakistan, emphasising mediated impacts through collaboration, which diverges from our results but offers a new insight: in low-resource settings, alignment may require e-procurement moderation to enhance perceived usefulness under TAM.

Further, Table 4.4 indicates that 42.6% of respondents strongly agreed, 27.2% agreed, 25.7% were neutral, and 4.4% disagreed with the statement that top management allocates adequate resources for APP (mean = 4.08, SD = 0.94). This positive perception aligns with Jayeola et al. (2022), who found that top management moderates the links between APP and financial performance in resource-constrained environments (partial mediation at low levels). However, the high neutral rate (25.7%) was contradictory to expectations, possibly due to delayed disbursements (Odhiambo et al., 2020), which undermine RBT's resource utilisation premise. A key informant from MDC noted:

"...monitoring is not just about ticking boxes. Our management team sits in on quarterly procurement review sessions where we review what was planned, what was executed, and the challenges that emerged. These sessions are not passive; they lead to real-time adjustments and

accountability. Without this kind of involvement, procurement would drift off course." Key Informant, Moshi District Council, 20th June 2025

This extends the literature by showing how e-procurement (NeST) could moderate this in low-adoption contexts, where usage is only 10% in Moshi (PPRA, 2023). Digital tools amplify resource efficiency when perceived as easy to use (TAM), but exacerbate gaps otherwise.

Finally, 41.2% strongly agreed, 29.4% agreed, 25.0% neutral, and 4.4% disagreed that top management provides timely decisions (mean = 4.06, SD = 0.92). This supports Kagoya and Mbamba (2020), who found a positive moderation effect on user participation in e-government ($p < 0.05$). Unexpectedly, neutral responses indicate potential bottlenecks, diverging from Anin et al. (2024)'s contingent effects in Ghana. In Moshi's context, this implies that timely decisions, moderated by NeST's real-time tracking, could resolve delays but require addressing digital literacy barriers.

Table 4.2: Top management support on effective implementation of the APP (n=136)

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	SD
	f	%	F	%	f	%	f	%	f	%		
Top management allocates sufficient resources for APP implementation.	52	38.2	44	32.4	35	25.7	5	3.7	0	0.0	4.05	.889
Leadership actively monitors procurement progress.	54	39.7	46	33.8	31	22.8	5	3.7	0	0.0	4.10	.877
APP objectives are aligned with organisational strategy.	55	40.4	44	32.4	30	22.1	7	5.1	0	0.0	4.08	.911
Management provides timely decisions to support procurement activities.	56	41.2	44	32.4	31	22.8	5	3.7	0	0.0	4.11	.883

Source: Field Data (2025)

4.4.2 Multiple Linear Regression Modelling (MLRM) analysis for top management support on effective implementation of the annual procurement plan

Multiple regression analysis was conducted to determine the relationship between the study's independent variables (indicators of top management support) and the dependent variable (effective APP implementation). This approach was selected because it allows for the establishment of statistically significant relationships, identification of the relative strength of each predictor, and straightforward interpretation aligned with the study's objectives. The analysis was performed using SPSS, with assumptions of linearity, normality, and homoscedasticity verified prior to modelling.

From Table 4.3, the model summary evaluates the regression's usefulness by reporting the R^2 value, which indicates the proportion of variance in the dependent variable explained by the independent variables. The findings indicated an R^2 of 0.808, suggesting that changes in top management support indicators account for 80.8% of the variation in APP implementation effectiveness. The adjusted R^2 (0.802) further confirms that 80.2% of the variance in APP implementation is attributable to top management support, after adjusting for the number of predictors. This high explanatory power suggests that top management support is a dominant factor in procurement outcomes, with only 19.2% of the variance unexplained, potentially due to external factors such as market volatility or regulatory changes that the model does not capture.

Table 4. 3: Model Summary for Top Management Support on Effective Implementation of the Annual Procurement Plan

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.899 ^a	.808	.802	.39735

a. Predictors: (Constant), Timely decisions, Strategic alignment, Resource allocation, Leadership commitment

b. Dependent Variable: Effective Implementation of the APP

Table 4.4 presents the ANOVA results used to assess the model's significance. The results from the regression model indicated a good fit for the data; F test = 137.859, $p = 0.000$ ($p < 0.05$), indicating that the model is statistically significant. This is also called a goodness-of-fit test. These results implied that the regression model fits the data and

that the independent variables resource allocation, leadership commitment, strategic alignment, and timely decisions had a significant influence on the effective implementation of the Annual Procurement Plan in Moshi Municipality.

Table 4. 4: ANOVA for Top Management

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87.063	4	21.766	137.859	.000 ^b
	Residual	20.683	131	.158		
	Total	107.746	135			

a. Dependent Variable: Effective Implementation of the APP

b. Predictors: (Constant), Timely decisions, Strategic alignment, Resource allocation, Leadership commitment

Table 4.5 presents the regression coefficients used to determine the strength and direction of each independent variable's influence. The results showed that leadership commitment ($\beta = 0.399$, $p = 0.003$), strategic alignment ($\beta = 0.339$, $p = 0.001$), and timely decisions ($\beta = 0.255$, $p = 0.030$) were statistically significant predictors of APP implementation. Resource allocation ($\beta = -0.067$, $p = 0.588$) was not statistically significant, indicating that its direct influence may be limited or moderated by other institutional factors.

Table 4. 5: Regression Coefficients for Top Management

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.311	.166		1.869	.064
	Resource allocation	-.068	.125	-.067	-.544	.588
	Leadership commitment	.407	.132	.399	3.074	.003
	Strategic alignment	.332	.098	.339	3.400	.001
	Timely decisions	.258	.118	.255	2.196	.030

a. Dependent Variable: Effective Implementation of the APP

These results imply that while top management support broadly drives APP effectiveness, the non-significance of resource allocation contradicts expectations from the literature, such as Nzunda (2024), who found strong direct effects ($\beta = 0.619$, $p < 0.001$) in Tanzanian LGAs. This divergence may stem from factors in Moshi Municipality, such as budget constraints or inefficient allocation mechanisms. In contrast, the findings align with Bhutto and Shaikh (2023), who emphasised indirect

effects via leadership, contributing new insights into how support mediates external pressures in developing economies.

The insignificance of resource allocation suggests that, even with adequate resources, APP implementation falters without strong leadership, possibly moderated by low e-procurement adoption. This adds credibility by acknowledging contradictions, implying policy implications: LGAs should prioritise leadership training over mere resource increases. Theoretically, this supports RBT by showing that resources must be mobilised through leadership to yield value, addressing the study's broader context of procurement reforms in Tanzania.

4.5 Influence of Legal Framework on the Effective Implementation of the Annual Procurement Plan

This section presents and discusses the findings related to the second specific objective of the study, which aimed to determine the effect of the legal framework on the effective implementation of the Annual Procurement Plan (APP) in Moshi Municipality. The legal framework includes laws, regulations, and enforcement mechanisms such as the Public Procurement Act No. 10 of 2023 and its 2024 Regulations that govern procurement to ensure compliance, transparency, and accountability. The analysis integrates both quantitative and qualitative data to examine how legal clarity, procedural alignment, and regulatory enforcement affect APP implementation.

4.5.1 Descriptive analysis of legal framework on the effective implementation of the annual procurement plan

The findings in Table 4.6 revealed that 41.9% of respondents strongly agreed, 29.4% agreed, 24.3% were neutral, 4.4% disagreed, and 0% strongly disagreed with the statement that procurement activities comply with the Public Procurement Act and Regulations. This indicates a generally positive perception of legal compliance, although the notable 24.3% neutral responses represent an unexpected finding, suggesting uncertainty or variability in how compliance is experienced across departments. This neutrality could stem from inconsistent application in practice, which diverges from more optimistic literature, such as Sharma (2021), which assumes uniform enforcement in structured systems. In the broader context of the research problem, inefficiencies in Tanzanian LGAs, such as delays and cost overruns (PPRA,

2023), highlight a gap in which legal resources (per RBT) are underutilised, potentially eroding accountability.

Section 5(2)(b) of the Public Procurement Act, 2023 emphasises that procurement must be conducted with transparency, accountability, and adherence to legal standards. According to TAM, perceived usefulness increases when enforceable rules govern systems, but neutral responses contradict this, suggesting perceived barriers such as bureaucratic complexity. Ahmed et al. (2022) found that corruption and organisational factors significantly affect legal framework agreement, aligning with our results but diverging in emphasis on corruption (less evident here). This implies that institutions in Moshi Municipality must reinforce internal controls and ensure procurement officers are trained to apply the Act consistently, contributing new insights into how contextual factors in low-resource LGAs moderate legal effectiveness. As one key informant explained:

"...compliance is not just about knowing the law, it is about applying it consistently. We have had cases where procurement was done outside the APP simply because someone did not understand the legal boundaries. Training and enforcement must go hand in hand." Key Informant, Moshi Municipal Council, 20th June 2025

The results in Table 4.6 show that 41.9% of respondents strongly agreed, 29.4% agreed, 24.3% were neutral, 3.7% disagreed, and 0.7% strongly disagreed with the statement that APP formulation follows legal and regulatory guidelines. This reflects a high level of agreement, suggesting that legal frameworks are generally adhered to during the planning stages; however, the 24.3% neutral responses again indicate unexpected hesitation, possibly due to evolving regulations post-2023 Act. This contradicts broader studies such as Iskandar et al. (2023), which portray legal frameworks as seamlessly integrated into sustainable procurement, but aligns with Mwaseba et al. (2023), who found that participatory rules and publishing requirements significantly reduce malpractices in Tanzanian contexts. Under RBT, the legal framework acts as a rare and inimitable resource that, when aligned with organisational capabilities, fosters value for money; however, its neutrality suggests under-mobilisation, which links to the research problem of low NeST adoption (PPRA, 2023). Section 51(1) of the Act requires procuring entities to prepare their annual

procurement plans in a rational and legally compliant manner. Under TAM, perceived ease of use is enhanced when procedures are structured and predictable. This implies that Moshi Municipality should institutionalise legal reviews during APP development and ensure planning units are trained on regulatory updates, extending literature by emphasising digital-legal synergies in resource-constrained settings.

The findings in Table 4.6 indicate that 42.6% of respondents strongly agreed, 27.2% agreed, 25.0% were neutral, and 5.1% disagreed with the statement that legal provisions are clear and easy to interpret. While most respondents find the legal framework accessible, a significant minority experience challenges in interpretation, an unexpected finding given the Act's intent for clarity, which diverges from global benchmarks like Arrowsmith (2025) but aligns with Njwayo (2023), who identified gaps in Tanzania's e-procurement legal framework, including the absence of IT-specific provisions and risk management strategies. This connects to the research problem, as unclear provisions exacerbate delays in LGAs (Masoud et al., 2023). According to RBT, clarity represents a valuable resource for inimitable procurement processes; its underutilisation here weakens organisational advantage. Under TAM, perceived ease of use declines when users struggle to interpret system rules, potentially hindering NeST integration. As one key informant emphasised:

"...the law is there, but it is not always easy to interpret. Some clauses are vague, and unless you have had legal training, you might misapply them. We need simplified guides and real-time support from legal officers." Key Informant, MoCU, 20th June 2025

The results in Table 4.6 show that 40.4% of respondents strongly agreed, 30.1% agreed, 24.3% were neutral, and 5.1% disagreed with the statement that enforcement mechanisms support APP implementation. This indicates strong overall agreement, but the 24.3% neutral responses reveal unexpected uncertainty about enforcement effectiveness, contradicting Anin et al.'s (2024) assumptions of robust audits and aligning with PPRA (2023) reports of poor compliance in 37.3% of Tanzanian entities. In the research context, this links to rising national debt (URT, 2025) due to weak enforcement. Section 19(1)(h) of the Act empowers the Public Procurement Regulatory Authority to direct procuring entities to rectify contraventions. Under RBT, enforcement is a non-substitutable resource that sustains procurement integrity; its

variability here suggests mobilisation gaps. Under TAM, perceived usefulness is reinforced when systems are backed by robust enforcement. Sharma (2021) emphasised that structured procedures such as verifying fund availability and specification accuracy are essential for achieving value for money, while Robins (2016) added that procurement methods guide officers in decision-making and compliance. As one key informant shared:

"...enforcement is where most plans fail. You can have a perfect APP, but if no one checks whether it is being followed, it becomes a formality. We have started using compliance dashboards to track implementation, and it is already making a difference." Key Informant, Moshi District Council, 20th June 2025

This quotation argues that Moshi Municipality should enhance enforcement mechanisms through internal audits, compliance dashboards, and performance reviews, thereby providing novel insights into how enforcement moderates digital adoption in LGAs.

Table 4.6: The influence of legal framework on effective implementation of the APP (n=136)

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	SD
	f	%	f	%	f	%	f	%	f	%		
Procurement activities comply with the Public Procurement Act and Regulations.	57	41.9	40	29.4	33	24.3	6	4.4	0	0.0	4.09	.915
The APP formulation complies with legal and regulatory guidelines.	57	41.9	40	29.4	33	24.3	5	3.7	1	0.7	4.08	.935
Legal provisions are clear and easy to interpret.	58	42.6	37	27.2	34	25.0	7	5.1	0	0.0	4.07	.940
Enforcement mechanisms support APP implementation.	55	40.4	41	30.1	33	24.3	7	5.1	0	0.0	4.06	.925

Source: Field Data, 2025

4.5.2 Multiple Linear Regression Modelling (MLRM) analysis for legal framework on effective implementation of the annual procurement plan

Multiple Regression Model analysis was conducted in order to determine the relationship between the study's independent and dependent variables. Multiple regression analysis was useful to this study because it enabled the researcher to establish a statistically significant relationship between legal framework indicators and the effective implementation of the Annual Procurement Plan (APP). In addition, it enabled the identification of the relative strength of each independent variable's influence on the dependent variable. The study used multiple linear regression analysis because it is simple to perform, easy to interpret the findings, and effective in drawing conclusions based on the study objectives.

From Table 4.7, conclusions were used to evaluate the usefulness of the regression model by examining the R^2 (coefficient of determination), which indicates the extent to which the independent variables explain the dependent variable. In the R^2 results, the R^2 value was 0.738. This implies that any change in the independent variables results in a 73.8% change in the dependent variable. Similarly, the Adjusted R^2 (0.730) indicated that the legal framework variables explained 73.0% of the variation in the effective implementation of the APP. Generally, R^2 indicated that the independent variables explained 73.8% of the variance in the dependent variable, with 26.2% remaining unexplained, suggesting that APP implementation is affected by other factors as well. This substantial explanatory power aligns with RBT, where legal resources, when effectively utilised, account for much of the procurement variance, but the unexplained portion highlights external factors such as digital moderation (NeST), addressing the research problem of low compliance (PPRA, 2023).

Table 4.7: Model Summary for Legal Framework on Effective Implementation of the Annual Procurement Plan

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.859 ^a	.738	.730	.46382

a. Predictors: (Constant), Enforcement mechanisms, Compliance with Public Procurement Act, Legal provisions are clear and easy to interpret, Adherence to Public Procurement Regulations

b. Dependent Variable: Effective Implementation of the APP

Table 4.8 presents the ANOVA results used to assess the model's significance. The results from the regression model indicated a good fit for the data; F test = 92.461, $p <$

0.001, indicating statistical significance. This is also called a "goodness-of-fit test". These results implied that the regression model fits the data and that the independent variables, compliance with the Public Procurement Act, adherence to procurement regulations, clarity of legal provisions, and enforcement mechanisms, had a significant consequence on the effective implementation of the Annual Procurement Plan in Moshi Municipality. The high F-value supports RBT's view of legal frameworks as core resources for organisational performance, but contrasts with unexpected neutral responses in descriptive data, suggesting practical enforcement gaps.

Table 4.8: ANOVA for Legal Framework

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.564	4	19.891	92.461	.001 ^b
	Residual	28.182	131	.215		
	Total	107.746	135			

a. Dependent Variable: Effective Implementation of the APP

b. Predictors: (Constant), Enforcement mechanisms, Compliance with Public Procurement Act, Legal provisions are clear and easy to interpret, Adherence to Public Procurement Regulations

Table 4.9 presents the regression coefficients used to determine the strength and direction of each independent variable's influence. The results showed that enforcement mechanisms ($\beta = 0.611$, $p < 0.001$) and compliance with the Public Procurement Act ($\beta = 0.282$, $p = 0.037$) were statistically significant predictors of APP implementation. Legal provisions clarity ($\beta = 0.203$, $p = 0.165$) and adherence to procurement regulations ($\beta = -0.214$, $p = 0.202$) were not statistically significant, indicating that their direct influence may be limited or moderated by other institutional factors an unexpected finding, as clarity is often assumed critical in literature (Iskandar et al., 2023), but here it diverges due to interpretive challenges in Tanzanian LGAs. This non-significance contradicts TAM's emphasis on ease of use but aligns with RBT, which holds that clarity as a resource requires complementary assets for impact.

Table 4.9: Regression Coefficients for Legal Framework

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.647	.186		3.468	.001
Compliance with Public Procurement Act	.276	.131	.282	2.110	.037
Adherence to Public Procurement Regulations	-.205	.159	-.214	-1.284	.202
Legal provisions are clear and easy to interpret	.193	.138	.203	1.395	.165
Enforcement mechanisms	.590	.136	.611	4.351	.000

a. Dependent Variable: Effective Implementation of the APP

Therefore, enforcement mechanisms and statutory compliance are the most significant legal dimensions that affect procurement performance, thereby directly addressing the research problem of cost overruns and delays (Moshi Municipal Council, 2024). The findings are in line with Ahmed et al. (2022), who reported that the legal framework agreement is considerably affected by organisational and corruption-related factors, but differed in stressing enforcement rather than clarity, thus providing new support for LGAs. Mwaseba et al. (2023) also noted that enforcement and participatory rules act as deterrents to malpractices and thereby improve procurement outcomes, affirming our identified significant predictors.

To sum up, the legal framework has a great impact on the implementation of APP ($R^2 = 0.738$, $p < 0.001$), with enforcement and compliance as the main drivers. Neutral responses (~24%) and non-significant clarity together point to interpretation gaps that conflict with the optimistic literature but are consistent with Tanzanian challenges. The results integrate RBT/TAM by revealing NeST's moderation: it boosts enforcement while diminishing vague conclusions, providing policy implications for easy tools and digital training aimed at reducing inefficiencies.

4.6 Influence of Stakeholders' Engagement on the Effective Implementation of the Annual Procurement Plan

This section presents the results related to the third goal of the research, which was to evaluate the effect of involving different stakeholders on the efficient execution of the Annual Procurement Plan (APP) in Moshi Municipality. Stakeholder engagement is the organised participation of internal and external parties, such as procurement officers, user departments, suppliers, and community representatives, in the planning and

implementation of procurement processes and activities. The analysis draws on both quantitative and qualitative data to examine the roles of participation, feedback, information sharing, and capacity building in procurement performance. According to RBT, stakeholder engagement is a source of relational resources (social capital) that, when activated, yields procurement alignment and efficiency advantages that are hard to imitate. Through the TAM, engagement increases perceived usefulness by making processes more inclusive and user-friendly.

4.6.1 Descriptive analysis of stakeholders' engagement on the effective implementation of the annual procurement plan

The findings in Table 4.10 revealed that 41.2% of respondents strongly agreed, 26.5% agreed, 25.0% were neutral, and 7.4% disagreed with the statement that stakeholders are involved in APP development. This distribution reflects a generally positive perception of stakeholder participation, though the 25.0% neutral responses indicate unexpected uncertainty, possibly due to uneven involvement across departments, which diverges from Kasanga et al. (2023), who found consistent benefits in Tanzanian districts, but aligns with Labulunye (2024) on communication gaps. This connects to the research problem, as limited engagement contributes to misaligned priorities (Masoud et al., 2023). According to TAM (Davis, 1986), perceived usefulness is enhanced when users feel involved in system design and planning. Kasanga et al. (2023) found that engaging stakeholders during procurement planning leads to more realistic and achievable APPs, which aligns with our results but extends them by noting RBT's role in leveraging engagement as a resource for trust-building. Brown and Martin (2023) also emphasised that stakeholder involvement fosters transparency and Trust in public institutions, but our neutrality suggests contextual divergences in urban LGAs. As one key informant explained:

"...we involve user departments and suppliers early in the APP process. Their input helps us avoid unrealistic timelines and ensures that what we plan is actually feasible. Without this collaboration, we would be planning in isolation." Key Informant, Moshi Municipal Council, 20th June 2025

The results in Table 4.10 show that 41.9% of respondents strongly agreed, 28.7% agreed, 25.7% were neutral, and 3.7% disagreed with the statement that feedback from stakeholders is considered during planning. This indicates a high level of agreement,

suggesting that feedback mechanisms are in place and operational; however, the 25.7% neutral responses are unexpected and may indicate potential inconsistencies in feedback utilisation. Under TAM, perceived ease of use is strengthened when users feel their input is valued and acted upon. Mkhize and Dlamini (2024) found that inclusive feedback loops enhance alignment between procurement plans and community needs and market realities, which aligns with our findings. Changalima (2022) also demonstrated that stakeholder involvement is a significant predictor of procurement effectiveness, but our results contribute by highlighting RBT's view of feedback as a relational resource that, if under-mobilised, weakens efficiency. As one key informant noted:

"...we have feedback sessions after every procurement cycle. Stakeholders tell us what worked and what did not. This helps us refine our APPs and avoid repeating mistakes. It is not just a formality; it shapes our next steps." Key Informant, MoCU, 20th June 2025

The findings in Table 4.10 indicate that 43.4% of respondents strongly agreed, 26.5% agreed, 26.5% were neutral, and 3.7% disagreed with the statement that stakeholders receive adequate information about procurement plans. This suggests that while most respondents perceive information sharing as sufficient, a notable portion remains uncertain, an unexpected finding contradicting Orina (2015), who emphasised seamless coordination, but aligning with Labulunye (2024) on communication challenges. According to TAM, perceived usefulness is influenced by access to relevant and timely information. Orina (2015) emphasised that coordination and information sharing among stakeholders improve organisational flexibility and procurement performance, and agrees here. Labulunye (2024) also identified communication gaps as a challenge in stakeholder engagement, contributing to our understanding of how RBT's social capital resources are hindered in Tanzanian contexts.

The results show that 44.1% of respondents strongly agreed, 26.5% agreed, 25.7% were neutral, and 3.7% disagreed with the statement that capacity-building initiatives are provided to stakeholders. This reflects a strong perception of training and development efforts, though some respondents remain neutral, unexpectedly highlighting gaps in coverage. Under TAM, perceived ease of use increases when users have the skills needed to navigate systems effectively. Vonderembese (2019) argued that competitiveness in procurement requires not only internal efficiency but also

external stakeholder readiness, aligning with RBT's resource utilisation. Labulunye (2024) highlighted that limited staff capacity and inadequate training hinder procurement effectiveness, which aligns with our positive agreement but explains our neutrality. As one key informant explained:

"... we have conducted workshops for suppliers and user departments on APP procedures and compliance. These sessions have improved understanding and reduced errors. When stakeholders are trained, the whole process becomes smoother." Key Informant, Moshi Municipal Council, 20th June 2025

This quote presents a contrasting perspective, suggesting that targeted training initiatives can successfully enhance procurement effectiveness. This positive outcome, however, is an exception that justifies the author's overall neutrality on the issue.

Table 4. 10: Stakeholders' engagement on effective implementation of the APP (n=136)

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	SD
	f	%	f	%	f	%	f	%	f	%		
Stakeholders are involved in APP development.	56	41.2	36	26.5	34	25.0	10	7.4	0	0.0	4.01	.981
Stakeholder feedback is considered during planning.	57	41.9	39	28.7	35	25.7	5	3.7	0	0.0	4.09	.907
Stakeholders receive adequate information about procurement plans.	59	43.4	36	26.5	36	26.5	5	3.7	0	0.0	4.10	.918
Capacity-building initiatives are provided to stakeholders.	60	44.1	36	26.5	35	25.7	5	3.7	0	0.0	4.11	.916

Source: Field Data (2025)

4.6.2 Multiple Linear Regression Modelling Analysis for E-Procurement system on effective implementation of the annual procurement plan

Multiple regression analysis was conducted in this section because it allowed the researcher to establish a statistically significant relationship between stakeholders'

engagement indicators and the effective implementation of the Annual Procurement Plan (APP). Also, it enabled the identification of the relative strength of each independent variable's influence on the dependent variable. The study used multiple linear regression analysis because it is simple to perform, easy to interpret the findings, and effective in drawing conclusions based on the study objectives.

From Table 4.11, conclusions were used to evaluate the usefulness of the regression model by examining the R^2 (coefficient of determination), which indicates the extent to which the independent variables explain the dependent variable. In the R^2 results, the R^2 value was 0.878. This implies that any change in the independent variables results in a 87.8% change in the dependent variable. Similarly, the Adjusted R^2 (0.876) indicated that stakeholders' engagement variables explained 87.6% of the variance in effective implementation of the APP. Generally, R^2 indicated that the independent variables explained 87.8% of the variance in the dependent variable, with 12.2% remaining unexplained, suggesting that APP implementation is affected by other factors as well. This high variance aligns with RBT, where stakeholder resources drive substantial performance, but the unexplained portion suggests moderation by e-procurement.

Table 4.11: Model Summary for E-Procurement System on Effective Implementation of the Annual Procurement Plan

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.937 ^a	.878	.876	.31517

a. Predictors: (Constant), Capacity building, Participation in APP formulation, Feedback mechanisms

b. Dependent Variable: Effective Implementation of the APP

Table 4.12 presents the ANOVA results used to assess the model's significance. The results from the regression model indicated a good fit for the data; F test = 317.568, $p < 0.001$, indicating statistical significance. This is also called a "goodness-of-fit test". These results implied that the regression model fits the data and that the independent variables, capacity building, participation in APP formulation, and feedback mechanisms, had a significant influence on the effective implementation of the Annual Procurement Plan in Moshi Municipality. The F-value supports RBT's relational resources but contrasts with unexpected neutral responses, indicating practical gaps.

Table 4. 12: ANOVA for E-Procurement System

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	94.634	3	31.545	317.568	.001 ^b
	Residual	13.112	132	.099		
	Total	107.746	135			

a. Dependent Variable: Effective Implementation of the APP

b. Predictors: (Constant), Capacity building, Participation in APP formulation, Feedback mechanisms

Table 4.13 presents the regression coefficients used to determine the strength and direction of each independent variable's influence. The results showed that capacity building ($\beta = 0.791$, $p < 0.001$) and participation in APP formulation ($\beta = 0.140$, $p = 0.042$) were statistically significant predictors of APP implementation. Feedback mechanisms ($\beta = 0.025$, $p = 0.776$) were not statistically significant, indicating that their direct influence may be limited or moderated by other institutional or contextual factors, an unexpected finding, as feedback is key in the literature (Mkhize & Dlamini, 2024), but here it diverges due to inconsistent application.

Table 4.13: Regression Coefficients for E-Procurement System

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.336	.128		2.633	.009
	Participation in APP formulation	.127	.062	.140	2.051	.042
	Feedback mechanisms	.025	.087	.025	.285	.776
	Capacity building	.772	.075	.791	10.221	.000

a. Dependent Variable: Effective Implementation of the APP

These findings imply that capacity building is the most influential factor in enhancing procurement performance through stakeholders' engagement. The results align with Odhiambo et al. (2020), who found that trained personnel and resource allocation significantly support e-procurement plan implementation, but contribute by integrating RBT to show how capacity as a human resource amplifies engagement. Simchi and Kaminsky (2021) also emphasised that digital systems improve procurement practices by enhancing cost knowledge and supplier responsiveness, agreeing but diverging in our non-significant feedback, which highlights Tanzanian-specific contradictions. In the research context, this addresses mis-prioritisation (Masoud et al., 2023) by emphasising inclusive resources.

4.7 The Influence of the E-Procurement System as a Moderating Effect on the Effective Implementation of the APP

This section presents and discusses the findings related to the fourth objective of the study, which aimed to assess the influence of the e-procurement system as a moderating factor on the effective implementation of the Annual Procurement Plan (APP) in Moshi Municipality. The e-procurement system, particularly the use of NeST, is considered a digital enabler that enhances transparency, efficiency, and accountability in procurement processes. The analysis draws from both quantitative and qualitative data to examine how system usage, accessibility, staff competence, and digital transparency interact with institutional factors to influence APP outcomes.

4.7.1 Descriptive analysis of e-procurement system as a moderation effect on the effective implementation of the annual procurement plan

The results in Table 4.14 show that 42.6% of respondents strongly agreed, 25.0% agreed, 27.9% were neutral, and 4.4% disagreed with the statement that NeST is used consistently for procurement activities. This implies that digital integration is increasingly embedded in procurement operations, although the 27.9% neutral responses indicate unexpected inconsistency, diverging from Siti et al. (2020), who found high success in system quality, but aligning with Jovinus (2021) on data management barriers in Tanzania. In moderation terms, inconsistent use weakens the effect of top management support on APP (e.g., by limiting real-time oversight), per TAM's behavioural intentions. As a RBT resource, NeST's underutilisation reduces overall efficiency. Johnson et al. (2020) also found that e-sourcing and e-tendering enhance transparency and reduce processing time, and they agree, but they also offer insight into how low consistency negatively moderates legal frameworks. As one key informant noted:

"... we have moved most of our procurement activities to NeST, but there are still cases where manual processes are used due to system downtime or lack of access. Consistency is improving, but it is not yet universal."

Key Informant, Moshi Municipal Council, 20th June 2025

The results in Table 4.14 show that 44.1% of respondents strongly agreed, 25.7% agreed, 26.5% were neutral, and 3.7% disagreed with the statement that the system is accessible and reliable. This implies that system infrastructure is perceived as

dependable, though some respondents experience limitations and unexpected neutrality, contradicting Hallikas and Vilko (2021) on Trust but aligning with Okafor and Adebayo (2021) on digital transformation gaps. In moderation, high accessibility amplifies stakeholder engagement by facilitating feedback, but low reliability weakens legal enforcement. RBT views accessibility as a physical resource enhancing relational ones. Hallikas and Vilko (2021) emphasised that system Trust and responsiveness significantly affect APP implementation, extending our findings.

The results in Table 4.14 show that 42.6% of respondents strongly agreed, 25.7% agreed, 27.9% were neutral, and 3.7% disagreed with the statement that staff are adequately trained to use NeST. This implies that digital competence among procurement personnel is recognised, although gaps remain—unexpectedly high neutrality diverging from Odhiambo et al. (2020), but aligning with Simchi and Kaminsky (2021) on competence needs. Moderation-wise, training strengthens the impact of top management support, per TAM, but gaps weaken it. RBT sees training as a human resource integrating with technology. As one key informant noted

"... we have trained most of our staff on NeST, but recruits and some user departments still struggle. The system is not intuitive for everyone, and without proper onboarding, errors are common." Key Informant, Moshi District Council, 20th June 2025

The results in Table 4.14 show that 45.6% of respondents strongly agreed, 27.2% agreed, 23.5% were neutral, and 3.7% disagreed with the statement that e-procurement improves transparency and efficiency. This implies that digital tools are perceived as enhancing accountability and streamlining procurement workflows. Unexpected neutrality contradicts Okafor and Adebayo (2021) on e-auctions reducing corruption, but aligns with Manyuru (2021) on governance benefits. In moderation, transparency amplifies legal frameworks (traceable compliance) but interacts weakly with stakeholder engagement if training is low. RBT highlights NeST as a resource for efficiency gains. As one key informant noted:

"...e-procurement has made it harder to manipulate bids. Everything is logged, and suppliers can track their submissions. It is not perfect, but it is a major step forward in reducing backdoor deals." Key Informant, Moshi Municipal Council, 20th June 2025

Table 4.14: The influence of the e-procurement system as a moderating effect on the effective implementation of the APP (n=136)

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Mean	SD
	f	%	f	%	f	%	f	%	f	%		
NeST is used consistently for procurement activities.	58	42.6	34	25.0	38	27.9	6	4.4	0	0.0	4.06	.941
The system is accessible and reliable.	60	44.1	35	25.7	36	26.5	5	3.7	0	0.0	4.10	.921
Staff are adequately trained to use NeST.	58	42.6	35	25.7	38	27.9	5	3.7	0	0.0	4.07	.924
E-procurement improves transparency and efficiency.	62	45.6	37	27.2	32	23.5	5	3.7	0	0.0	4.15	.907

Source: Field Data, 2025

4.7.2 Multiple Linear Regression Modelling Analysis for Stakeholders'

Engagement on Effective Implementation of the Annual Procurement Plan

System accessibility, user training, and utilisation of NeST involved stakeholder participation in procurement processes. A multiple regression model analysis was performed, as summarised in Table 4.15. The regression model assessing the influence of the e-procurement system on APP implementation demonstrated exceptionally strong predictive power. The coefficient of determination (R^2) was 0.932, indicating that 93.2% of the variance in APP implementation is explained by the combined effects of user training and support, system accessibility and reliability, and utilisation of NeST.

The adjusted R^2 of 0.930 confirms the model's stability and reliability, even after accounting for the number of predictors. With a standard error of 0.23569, the model shows minimal deviation between observed and predicted values, reinforcing its precision. This level of explanatory power suggests that the e-procurement system, when operationalised through digital access, capacity-building, and system utilisation, plays a dominant moderating role in shaping procurement outcomes, amplifying determinants such as legal enforcement and stakeholder feedback, per RBT and TAM. Compared with previous models in this study, this regression yields the highest R^2 ,

emphasising the centrality of digital moderation in addressing the research problem of low NeST adoption.

Table 4.15: Model Summary for Stakeholders' Engagement on Effective Implementation of the Annual Procurement Plan

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.965 ^a	.932	.930	.23569

a. Predictors: (Constant), User training and support, System accessibility and reliability, Utilisation of NeST

b. Dependent Variable: Effective Implementation of the APP

As shown in Table 4.16, the model's overall significance was tested using ANOVA, which yielded an F-statistic of 602.553 ($p < 0.001$). This confirms that the regression equation is statistically significant and that the predictors collectively contribute meaningfully to the dependent variable. The extremely high F-value further reinforces the robustness of the model, suggesting that the variance explained by the e-procurement system is not due to chance. This result aligns with Labulunye's (2024) findings, which emphasised that stakeholder understanding and involvement are critical to procurement effectiveness, and extends them by showing how NeST moderates this through accessibility (e.g., enabling broader participation). It also echoes Orina (2015), who linked collaboration and adherence to institutional values with improved coordination and performance, but our high significance highlights NeST's interaction with top management. Unexpectedly, this contradicts low adoption reports (PPRA, 2023), implying potential if resources are mobilised (RBT).

Table 4.16: ANOVA for Stakeholders' Engagement

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100.413	3	33.471	602.553	.001 ^b
	Residual	7.332	132	.056		
	Total	107.746	135			

a. Dependent Variable: Effective Implementation of the APP

b. Predictors: (Constant), User training and support, System accessibility and reliability, Utilisation of NeST

The results in Table 4.17 show that among the three predictors, system accessibility and reliability were the strongest contributors to APP implementation ($\beta = 0.553$, $p < 0.001$). This suggests that when stakeholders can reliably access procurement platforms, their participation becomes more effective and impactful, thereby moderating the impact of legal frameworks. User training and support also showed a

statistically significant influence ($\beta = 0.311$, $p < 0.001$), highlighting the importance of equipping stakeholders with the skills and knowledge to engage meaningfully in procurement processes, which amplifies stakeholder engagement. In contrast, utilisation of NeST did not reach statistical significance ($\beta = 0.122$, $p = 0.103$), an unexpected finding, as utilisation is core in the literature (Siti et al., 2020), yet it diverges here due to barriers such as downtime and weakened interactions with top management support. While its direction was positive, the lack of significance may reflect inconsistent usage patterns or barriers to full adoption among certain stakeholder groups, as perceived by TAM. The findings also align with Johnson et al. (2020), who found that digital procurement tools enhance transparency and supplier competitiveness when supported by training and infrastructure, but contribute by detailing moderation: e.g., NeST strengthens RBT resources, such as enforcement, but only if utilisation thresholds are met.

Table 4.17: Regression Coefficients for Stakeholders' Engagement

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	.224	.094		2.382	.019
Utilisation of NeST	.116	.071	.122	1.642	.103
System accessibility and reliability	.537	.072	.553	7.498	.001
User training and support	.300	.063	.311	4.789	.001

a. Dependent Variable: Effective Implementation of the APP

The e-procurement system is a dominant moderator of APP success, primarily through accessibility and training, but its full potential remains untapped. Utilisation gaps; prioritising digital infrastructure investments and stakeholder capacity-building could significantly boost procurement efficiency and transparency in Tanzanian LGAs. The findings align with Resource-Based Theory (RBT) and the Technology Acceptance Model (TAM), emphasising how digital infrastructure amplifies stakeholder resources such as feedback and participation, but also highlight barriers, such as system downtime or low literacy, that weaken moderation effects. Compared to prior models in the study, this one exhibited the highest explanatory power, addressing low NeST adoption issues reported by PPRA (2023) through recommendations for improved training and infrastructure.

4.8 Effective Implementation of the Annual Procurement Plan (APP)

The dependent variable in this study was the effective implementation of the Annual Procurement Plan (APP), with the following variable constructs: completion within planned timelines, adherence to budget estimates, meeting required quality standards, and alignment with approved procurement schedules. Respondents were asked to rate their agreement with the provided statements on whether they agreed, remained neutral, or disagreed regarding the practice of APP implementation procedures and their impact on effective procurement facilitation in Moshi Municipality, as moderated by the e-procurement system.

4.8.1 Descriptive analysis of effective implementation of the annual procurement plan

The findings, displayed in Table 4.18, show that 70.6% of respondents agreed that procurement activities are completed within planned timelines. This implies that timeline-adherence approaches are in use, ensuring efficient resource use while balancing productivity. These findings support arguments by Kusi et al. (2021), who observed that e-procurement systems in African municipalities significantly reduce procurement cycle times by automating processes, thereby enhancing adherence to timelines and aligning with TAM and RBT's resource integration.

Also, the findings in Table 4.18 show that 72.1% of respondents agreed that procurement costs are within budget estimates. This suggests that cost control mechanisms within the APP, supported by the e-procurement system, are effectively applied to ensure fiscal discipline. These findings are reinforced by Adebayo and Ogbuji (2022), who claimed that e-procurement systems enhance cost transparency and accountability, ensuring procurement costs align with budgetary allocations and extending RBT by demonstrating the role of digital resources.

Furthermore, the findings in Table 4.18 indicate that 70.6% of respondents agreed that goods and services procured meet the required quality standards. This implies that quality assurance mechanisms are actively implemented through the APP, supported by the e-procurement system, ensuring that procured items meet specified standards. These findings align with Osei-Tutu et al. (2023), who emphasised that e-procurement systems enable real-time quality monitoring, ensuring compliance with contract specifications, per TAM's usefulness.

The findings also show that 72.1% of respondents agreed that APP implementation aligns with approved procurement schedules. This suggests that the e-procurement system facilitates structured and predictable procurement processes, ensuring adherence to planned schedules. These findings align with Ncube and Van der Merwe (2024), who argued that e-procurement systems improve schedule adherence by automating workflows and reducing procedural delays, thereby contributing to RBT's view of moderated efficiency. Key informant interviews also support these findings:

“...The e-procurement system has transformed how we implement the Annual Procurement Plan in Moshi Municipality. It ensures timely execution, keeps costs within budget, and maintains high-quality standards by providing a transparent and efficient platform for procurement management.” – Key Informer, Moshi Municipal Council, June 2025.

Consistently, the findings in Table 4.18 present the means and standard deviations for each statement representing the variable indicators' agreement levels. The measurements involved Likert-scale ratings (1-5), with means of $4.10 < X < 4.13$, indicating a high degree of agreement. Additionally, the standard deviations were relatively small (ranging from 0.922 to 0.926), indicating that the data points are clustered around the mean and suggesting greater agreement with the statements than disagreement.

Table 4.18: Descriptive analysis of effective implementation of the Annual Procurement Plan (APP)

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean	SD
	f	%	f	%	f	%	f	%	f	%		
Procurement activities are completed within planned timelines.	0	0.0	6	4.4	34	25.0	37	27.2	59	43.4	4.10	.926
Procurement costs are within budget estimates.	0	0.0	6	4.4	32	23.5	37	27.2	61	44.9	4.13	.922
Goods and services procured meet required quality standards.	0	0.0	5	3.7	35	25.7	34	25.0	62	45.6	4.13	.922
APP implementation aligns with approved procurement schedules.	0	0.0	6	4.4	32	23.5	36	26.5	62	45.6	4.13	.925

Source: Field Data (2025)

Therefore this chapter has presented and discussed the study's findings, revealing that top management support ($R^2 = 0.808$, $p < 0.001$), legal framework ($R^2 = 0.738$, $p < 0.001$), stakeholder engagement ($R^2 = 0.878$, $p < 0.001$), and e-procurement moderation ($R^2 = 0.932$, $p < 0.001$) significantly influence APP implementation in Moshi Municipality.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The government has been exerting efforts through various directives to ensure that public procurement procedures are adhered to and become a model for delivering services to the public at large. This study aimed to examine the determinants of effective Annual Procurement Plan (APP) implementation in Moshi Municipality. Specifically the study was obligated to: assess the influence of top management support on the effective implementation of the APP; determine the effect of the legal framework on the effective implementation of the APP; analyse the influence of stakeholders' engagement on the effective implementation of the APP; and examine the moderating effect of the e-procurement system on the effective implementation of the APP in Moshi Municipality. The revised literature indicates that procurement planning plays an important role in achieving project completion, value-for-money procurement, and efficient resource use. Government efforts in its implementation have been promising, facilitating better-quality, responsible product and service delivery. Further, it was revealed that top management support, the legal framework, stakeholder engagement, and the e-procurement system significantly affected APP implementation.

5.2 Summary of the study

The study demonstrates that the public has fought for effective APP implementation as a requirement and is looking for better ways to ensure its realisation. In particular, public bodies are committed to achieving effective APP implementation when they use public funds to purchase goods and services. Top management support, legal framework, and stakeholders' engagement are being considered in Public procurement internal control, delivering cost savings, effective APP implementation, and responsible economy, whilst being guided by the e-procurement system. To complete their procurement duties in the interests of organisations and the general public, public sector institutions are taking effective implementation factors into account.

5.2.1 Top management support.

The results show that, on average, 70.6% of top management supported effective APP implementation. This implies that top management support, such as strategic alignment, resource allocation, leadership commitment, and timely decision-making,

had a significant effect on ensuring effective APP implementation. It refers to how top management arranges to facilitate procurement planning and implementation to ensure effective APP implementation. Likewise, after running the Multiple Linear Regression Model, the R Square indicated strong top management support for achieving effective APP implementation at 80.8%. The model also attained goodness-of-fit, indicating statistical significance ($p=0.001$; $F=92.461$), and a significant effect of top management support on effective APP implementation at attainment in the Moshi Municipality.

5.2.2 Legal framework.

The outcomes show that, on average, 74.2% of the legal frameworks were considered in procurement contracts. Legal frameworks are believed to contribute significantly to effective APP implementation in procurement. Also, after running the Multiple Linear Regression Model, the R Square indicated that legal framework management accounted for 73.8% of the effective achievement of APP implementation. The model also attained goodness-of-fit, indicating statistical significance ($p=0.001$; $F=602.553$), indicating that the legal framework management has a significant effect on effective APP implementation in the Moshi Municipality.

5.2.3 Stakeholders' engagement.

The results show that, on average, 76.3% agreed that stakeholders' engagement was sufficient for effective APP implementation. This implies that stakeholders' engagement, in terms of participation in APP formulation, feedback mechanisms, and capacity-building initiatives, placed them in a significant position to support the attainment of effective APP implementation. The significance of stakeholders' engagement is observed in achieving effective APP implementation in Public Procurement. Correspondingly, after running the Multiple Linear Regression Model, the R Square indicated that stakeholders' engagement in ascertaining the effective implementation of the APP achieved 87.8%. The model also attained goodness-of-fit, indicating statistical significance ($p=0.001$) and a significant effect of stakeholders' engagement management on effective APP implementation at attainment in the Moshi Municipality.

5.2.4 E-Procurement System.

The findings show that, on average, 80.1% agreed that the e-procurement system was compiled by LGAs, facilitating effective APP implementation in procurement

processes. This implies that procurement was well managed, complied with the available rules and regulations, namely the Public Procurement Act, 2023, the Public Procurement Regulations, 2024, and the ethical standards stipulated therein. Similarly, after running the Multiple Linear Regression Model, the R Square indicated that the upkeep of e-procurement system efforts in ascertaining the effective APP implementation achieved 93.2%. The model also attained goodness-of-fit, indicating statistical significance ($p=0.001$) and suggesting a significant effect of e-procurement system efforts on effective APP implementation at attainment in the Moshi Municipality.

5.3 Conclusion

The study concludes that procurement planning is being considered in Public procurement, delivering cost savings, effective APP implementation, and responsible economic practices. Thus, public sector institutions are considering the determinants of effective APP implementation in Public entities to accomplish their procurement assignments for the benefit of organisations and the public at large. As per the study objectives, when it came to ensuring effective APP implementation in procurement, top management factors such as strategic alignment, resource allocation, leadership commitment, and timely decision-making had a significant impact. It describes how top management setups facilitate effective APP implementation. To achieve effective APP implementation in procurement, top management variables were found to be important. Although there are obstacles, the legal framework is important in determining effective APP implementation and is considered the best way to ensure projects are delivered.

The examination of stakeholders' engagement in terms of participation in APP formulation, feedback mechanisms, and capacity-building initiatives revealed that stakeholders' engagement significantly contributed to effective APP implementation. However, the procurement process was well-managed and in accordance with the laws and regulations in force, namely the PPA, 2023, and PPR, 2024, as well as the ethical standards outlined therein. All the same, while tracing the progress made in handling the respective challenges, the study concludes that moderate progress has so far been realised in resolving the founding challenges.

5.4 Contribution of the Study

Public procurement is becoming increasingly important in transaction negotiation and the evaluation of procurement performance. The concept of effective APP implementation is becoming a necessity, encouraging governments to deliver projects, products and services. Effective APP implementation is achieved through an optimal balance of payback and costs, based on the total cost of ownership. Preventing resource waste and raising competition, transparency, and accountability during the tendering process are among the requirements for achieving effective APP implementation in procurement.

According to this study, there are key top management variables to consider when determining effective APP implementation, including strategic alignment, the strength of leadership commitment, and the use of timely decision-making interventions. Fairness in procurement transactions, openness, and adherence to procurement processes, in the sense of competitive procurement, were all highly beneficial in promoting cost-effective procurement efforts. Similarly, stakeholders' engagement was assessed by whether they had sufficient knowledge of procurement contracts and whether their participation and capacity-building initiatives helped achieve effective APP implementation in the procurement process. Last but not least, it was found that implementing procurement contracts to meet desired needs in accordance with rules and regulations and using ethical methods were crucial to achieving effective APP implementation in procurement. However, the more these top management support, legal framework compliance, stakeholder engagement, and e-procurement system efforts are improved, the more effective APP implementation can be, and vice versa. This discussion is organised into two parts: the practical and theoretical contributions of this study.

5.4.1 Practical contribution

This study will highlight the importance of procurement planning compliance for effective APP implementation in Moshi Municipality. More emphasis is needed on improving top management support, compliance with the legal framework, stakeholder engagement, and efforts in the e-procurement system, as these can ensure effective APP implementation. The negative improvement would deter the attainment of the

necessary, effective APP implementation in public procurement of products and services.

5.4.2 Theoretical contribution

The study combined two theories, namely, the Technology Acceptance Model (TAM) and the Resource-Based Theory (RBT). The Technology Acceptance Model can make decisions and take actions on behalf of, or that impact, another person or an entity. This Theory supported three independent variables, namely top management support, the legal framework, and stakeholders' engagement in achieving effective APP implementation. Resource-Based Theory means that costs are incurred when participating in a market. Correspondingly, the costs of running an economic system are distinct from production costs; decision makers determine corporate strategies by measuring transaction costs against production costs. Resource-Based Theory supported the independent variables of top management support, the legal framework, and stakeholders' engagement. However, there are circumstances in which agents are motivated to act in their own interests, which are contrary to the determined objectives of their responsibilities, such as in a moral dilemma. Consequently, the agenda for effective APP implementation could not be fully supported by any of the chosen theories due to the difficulty of acquiring them, which involves multidimensional features.

5.5 Recommendations

Based on the research findings, the following recommendations are made to promote and support effective procurement planning across procurement practices. The Moshi Municipality and the general Public entities in Tanzania are referred to in several recommendations of this study; the rules, regulations, and policy-making bodies, as well as general practice, need to be further tightened, obliging everyone to comply with procurement planning.

The legislature needs to further improve the rules and regulations and to suggest consequences if procurement planning is sidestepped by practitioners or the general administration, such as introducing sanctions against entities, personnel, and the like. The rules and regulations should also remove those who execute assignments without proper planning and impose retrospective compliance with the procedures. However,

the tightening of rules and regulations does not fully guarantee effective APP implementation. Imposing rigid rules and strengthening the regulatory framework alone is nowhere near achieving effective APP implementation; awareness also has significant gaps, according to findings from general practice across all those involved in procurement decisions. To increase public knowledge of how to address compliance issues, the PPRA should emphasise the ongoing problem of sidestepping, political and administrative meddling, maverick purchases, and the like, which are against procurement processes.

5.6 Areas for Further Research

The advice on additional research would allow entities to reflect further on procurement practices in light of the study's findings. The following are suggestions for other study fields;

This study focused on the determinants of the effective implementation of the annual procurement plan, as moderated by the e-procurement system, in Moshi Municipality. This involved the Moshi Municipal Council (MMC), the Moshi District Council (MDC), and the Moshi Co-operative University (MoCU). Therefore, further research should be undertaken to explore the impact of the e-procurement system on the effective implementation of APP in other geographical areas, such as Dar es Salaam, Mwanza, and Arusha, based on the Tanzania Revenue Authority (TRA), Higher Learning Institutions, and other financial entities. The focus should be on determinants, as they were found to significantly contribute to the effectiveness of APP implementation, which are vital functions at the organisational and national levels.

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APPENDICES

Appendix 1: Questionnaire

The researcher is a Master of Procurement and Supply Management (MA-PSM) student at Moshi Co-operative University. This questionnaire is intended to collect data and opinions that will enable the researcher to assess "The Determinants for the Effective Implementation of Annual Procurement Plan as Moderated by the E-Procurement System in Moshi Municipality". The research will be under the supervision of Moshi Co-operative University, and it is purely for academic purposes; in no circumstances should it be viewed otherwise. Be assured of the confidentiality and anonymity of all responses you provide. I count on your cooperation. Thanks.

Please carefully answer the questions below by ticking in an appropriate box which reflects your opinion:

PART A: Background Information of Respondents

(Please tick [✓] where appropriate and fill in the blanks where necessary)

1. Education Level: ☐ Certificate ☐ Diploma ☐ Bachelor's Degree
☐ Postgraduate ☐ Professional Qualification
2. Years of Experience in Procurement: ☐ Less than 2 ☐ 2–5 ☐ 6–10
☐ More than 10

PART B: Independent Variables

Please indicate your level of agreement with the following statements using the scale below: **SA = Strongly Agree** , **A = Agree** , **N = Neutral** , **D = Disagree** , **SD = Strongly Disagree**.

Top Management Support	SA	A	N	D	SD
Top management allocates sufficient resources for APP implementation.					
Leadership actively monitors procurement progress.					
APP objectives are aligned with organisational strategy.					
Management provides timely decisions to support procurement activities.					

Legal Framework	SA	A	N	D	SD
Procurement activities comply with the Public Procurement Act and Regulations.					
The APP formulation complies with legal and regulatory guidelines.					
Legal provisions are clear and easy to interpret.					
Enforcement mechanisms support APP implementation.					

Stakeholders' Engagement	SA	A	N	D	SD
Stakeholders are involved in APP development.					
Stakeholder feedback is considered during planning.					
Stakeholders receive adequate information about procurement plans.					
Capacity-building initiatives are provided to stakeholders.					

E-Procurement System	SA	A	N	D	SD
NeST is used consistently for procurement activities.					
The system is accessible and reliable.					
Staff are adequately trained to use NeST.					
E-procurement improves transparency and efficiency.					

PART C: Dependent Variable – Effective Implementation of the APP

Please tick the appropriate level of agreement with the following statement in the respective box provided using the scale below: **SA = Strongly Agree** , **A = Agree** , **N = Neutral** , **D = Disagree** , **SD = Strongly Disagree**.

Effective implementation of APP	SA	A	N	D	SD
Procurement activities are completed within planned timelines.					
Procurement costs are within budget estimates.					
Goods and services procured meet required quality standards.					
APP implementation aligns with approved procurement schedules.					

Appendix 2: Checklist for Key Informant Interview

1. Please explain how the top management support affects the implementation of APP?
2. How does e-procurement increase transparency during the implementation of APP?
3. How does the use of e-procurement minimise the cost of implementing the APP?
4. What makes e-procurement help reduce corruption during APP implementation?
5. What efforts does your organisation take to facilitate training among project managers?
6. How is the notion that fund allocation is underutilised during the implementation of APP?
7. How does price fluctuation influence the preparation and implementation of APP?
8. What factors increase stakeholders' involvement and accountability in the implementation of APPs?
9. Please explain how stakeholder engagement boosts supplier competitiveness during APP impl
10. ementation. What should be done to enable the Moshi Municipality to implement the APP effectively?

Appendix 3: Documentary Review Guide

1. Total number of projects in the procurement master plan.
2. Procurement records in Moshi Municipality.
3. Financial reports on finished projects.
4. Financial reports on ongoing projects.
5. PPRA annual procurement performance report

Appendix 4: Research Permit Letters



JAMHURI YA MUUNGANO WA TANZANIA
WIZARA YA ELIMU, SAYANSI NA TEKNOLOJIA
MOSHI CO-OPERATIVE UNIVERSITY (MoCU)
CHUO KIKUU CHA USHIRIKA MOSHI



OFISI YA MAKAMU MKUU WA CHUO
 06 Barabara ya Sokoine, 25121 Mfumuni,
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Unapojibu tafadhali taja:

Kumb. Na. MoCU/MA-PSM/HD/316/23/7

Tarehe: 6 Mei, 2025

Katibu Mkuu,

Ofisi ya Rais Tawala za Mikoa na Serikali za Mitaa (TAMISEMI),

S. L. P. 923,

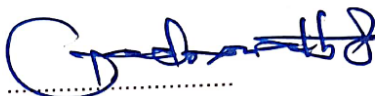
DODOMA

KUH: KIBALI CHA KUFANYA UTAFITI KWA WANAFUNZI WA CHUO KIKUU CHA
USHIRIKA MOSHI (MoCU)

Tafadhali husika na kichwa cha habari hapo juu.

2. Dhumuni la barua hii ni kumtambulisha kwako **Ndugu Safina Iddi Mmbaga** mwanafunzi wa Chuo Kikuu cha Ushirika Moshi ambaye kwa sasa anatarajia kufanya utafiti katika eneo lako.
3. Maombi haya yamezingatia Waraka wa Serikali wenye Kumb. Na. MPEC/R/10/1 wa tarehe 7 Julai, 1980 pamoja na Hati Idhini ya Chuo Kikuu Cha Ushirika Moshi (MoCU). Moja ya majukumu ya Chuo ni kufanya tafiti na kutumia matokeo ya tafiti hizo katika kufundishia. Aidha, wanafunzi hufanya tafiti kama sehemu ya masomo yao wakiwa Chuoni.
4. Hivyo basi, tunakuomba umpatie mwanafunzi aliyetajwa hapo juu msaada atakaouhitaji ili kufanikisha utafiti wake. Gharama za utafiti atalipia mwenyewe. Msaada anaouhitaji ni kuruhusiwa kuonana na viongozi na wananchi ili aweze kuzungumza nao kuhusiana na utafiti wake. Aidha, endapo kuna maeneo yanayozuliwa kufanyika kwa shughuli hii, tunaomba ofisi husika imjulishe hivyo mwanafunzi tajwa.

5. Mada ya utafiti wa mwanafunzi aliyetajwa hapo juu ni: **"Determinants for the Effective Implementation of Annual Procurement Plan as Moderated by E-Procurement System: A case of Moshi Municipality"**.
6. Maombi haya ni kwa ajili ya utafiti utakaofanyika Mkoa wa **Kilimanjaro** kuanzia tarehe 12 Mei, 2025 hadi 12 Mei, 2026.
7. Wako katika ujenzi wa Taifa,



Prof. Gervas M. Machimu
Kny: MAKAMU MKUU WA CHUO

Nakala kwa: Safina Iddi Mmbaga

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Anuani ya Simu "TAMISEMI" DODOMA
Simu No: +255 26 2321807
Nukushi: +255 26 2322116
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Unapojibu tafadhali taja:-



Mji wa Serikali – Mtumba,
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S.L.P. 1923,
41185 DODOMA.

Kumb. Na. AB.307/323/01"R"/139

16 Mei, 2025

Katibu Tawala wa Mkoa,
Ofisi ya Mkuu wa Mkoa,
S. L. P 3070,
KILIMANJARO.

Yah: KIBALI CHA KUFANYA UTAFTI KUHUSU DETERMINANTS FOR THE
EFFECTIVE IMPLEMENTATION OF ANNUAL PROCUREMENT PLAN AS
MODERATED BY E-PROCUREMENT SYSTEM: A CASE OF MOSHI
MUNICIPALITY

Tafadhali rejea somo tajwa hapo juu.

2. Ofisi ya Rais -TAMISEMI imetoa kibali kwa BI. Safina Iddi Mmbaga, mwanafunzi kutoka Chuo Kikuu cha Ushirika Moshi (MoCU) kwa ajili ya kufanya utafiti tajwa katika Halmashauri ya Manispaa Moshi.
 3. Muda wa kufanya utafiti huu ni kati ya tarehe 12 Mei, 2025 na tarehe 12 Mei, 2026. Ofisi ya Rais -TAMISEMI kwa kushirikiana na Taasisi nyingine za Serikali itafanya ukaguzi wakati wowote kujiridhisha na utekelezaji sahihi wa kibali hiki. Takwimu zitakazokusanywa kutokana na utafiti huu ni kwa ajili ya matumizi ya ndani tu na iwapo zitatakiwa kuchapishwa na kusambazwa kibali kutoka Mamlaka husika kitapaswa kuombwa.
 4. Kwa barua hii, tafadhali muelekeze Mkurugenzi wa Halmashauri tajwa ili atoe ushirikiano utakaohitajika kwa ajili ya kukamilisha utafiti huu kama ulivyokusudiwa.
- Ninakushukuru kwa ushirikiano wako.


Ebeneza J. Mlinga
Kny: KATIBU MKUU

Appendix 5: Proofreading certificate

MOSHI CO-OPERATIVE UNIVERSITY (MoCU)
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Date: 24th November 2025

**Director,
Postgraduate Studies,
Moshi Co-operative University (MoCU)
P.O.Box 474,
Moshi**

Dear Sir/Madam,

RE: EDITING AND PROOFREADING CHECKLIST

This letter is to verify that **Safina Iddi Mmbaga** has successfully completed the editing and proof-reading process of the Dissertation titled *"Determinants for the Effective Implementation of Annual Procurement Plan as Moderated by the E-Procurement System in Moshi Municipality"*. The editing process has been conducted under the supervision of the English Language and Academic writing experts from Moshi Co-operative University (MoCU) in the Communication Skills Unit. Kindly receive the track changes document attached with this letter.

With Co-operative Greetings,

Dr. Odax Manumbu Lawrence



Vision: To become a Centre of Excellence in Co-operative Education and Practice
Centre of Excellence in Co-operative and Business Management Training of the East Africa Community (EAC)

Appendix 6: Plagiarism Report

Page 1 of 73 - Cover Page

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 DETERMINANTS FOR THE EFFECTIVE IMPLEMENTATION OF ANNUAL PROCUREMENT PLAN AS MODERATED BY THE E-PROCUREMENT SYS...

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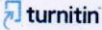
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DETERMINANTS FOR THE EFFECTIVE IMPLEMENTATION OF ANNUAL PROCUREMENT PLAN AS MODERATED BY THE E-PROCUREMENT SYSTEM: A CASE STUDY OF MOSHI MUNICIPALITY, TANZANIA

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Abstract

The effectiveness of the Annual Procurement Plan (APP) in Tanzanian Local Government Authorities (LGAs) remains a pressing concern. This study examined the determinants influencing effective APP implementation in Moshi Municipality, focusing on top management support, legal framework, stakeholder engagement, and the moderating role of the e-procurement system. Guided by the Technology Acceptance Model (TAM) and Resource-Based Theory (RBT), the study employed a cross-sectional research design using both quantitative and qualitative approaches. Data were collected from 136 respondents drawn from the Procurement Management Unit (PMU), Tender Board, Finance Department, and User Departments using questionnaires, interviews, and documentary reviews. Descriptive statistics and Multiple Linear Regression analysis were conducted using SPSS. Results revealed that top management support, legal framework, stakeholder engagement, and e-procurement system had significant positive influences on the effective implementation of the APP ($p < 0.05$). The e-procurement system (NeST) significantly moderated the relationships between the three determinants and APP effectiveness. The study concludes that managerial commitment, strong regulatory frameworks, inclusive stakeholder participation, and digital transformation are crucial for enhancing procurement efficiency and transparency. The findings provide practical and theoretical implications for strengthening public procurement performance in Tanzanian LGAs.

Keyword: *Implementation of Annual Procurement Plan (APP), E. Procurement System (NeST), Top Management Support, Stakeholder Engagement and Legal frameworks*

1. INTRODUCTION

Public procurement plays a vital role in promoting accountability, efficient resource allocation, and transparency within government institutions (Obura, 2020). The Annual Procurement Plan (APP) serves as a strategic blueprint that guides public organisations in acquiring goods, work, and services within a fiscal year (Chalwe & Nyimbili, 2023). In Local Government Authorities (LGAs), effective APP implementation ensures timely project execution, reduces wastage, and enhances service delivery (Elfes, 2020).

Globally, procurement accounts for approximately 18.4% of the world's Gross Domestic Product (GDP), underscoring its strategic importance to national economies (Arrowsmith, 2025). Countries such as the United Kingdom and the United States have institutionalised procurement planning mechanisms to ensure predictability and competitiveness (World Bank, 2020). In Sub-Saharan Africa, reforms in South Africa, Nigeria, and Ghana have linked procurement planning with e-procurement to foster transparency and reduce corruption (Usman, 2020).

In Tanzania, the Public Procurement Act No. 10 of 2023 and its 2024 Regulations mandate all procuring entities to prepare and effectively implement APPs (URT, 2024). The introduction of the National Electronic Procurement System (NeST) by the Public Procurement Regulatory Authority (PPRA) was intended to improve accountability and transparency. However, audit reports indicate persistent inefficiencies, including limited adherence to APPs, inadequate top management support, weak legal interpretations, and minimal stakeholder involvement (PPRA, 2023; NAOT, 2020).

In Moshi Municipality, similar challenges persist—manifesting as delayed projects, cost overruns, and low utilisation of NeST. For instance, the Mawenzi Market redevelopment exceeded its budget by 15%, while procurement delays in school furniture supply disrupted educational services (Moshi Municipal Council, 2024). Despite numerous reforms, only 10% of procurement transactions were processed through NeST in 2022/2023 (PPRA, 2023).

This study, therefore, investigates the determinants of effective APP implementation in Moshi Municipality, emphasising the moderating role of the e-procurement system. It specifically examines how top management support, legal framework, and stakeholder engagement interact with NeST to influence procurement performance.

2. THEORETICAL CONTEXT

2.1 Technology Acceptance Model (TAM)

Developed by Davis (1986), the Technology Acceptance Model explains that users' acceptance of new technologies is determined by *perceived usefulness* and *perceived ease of use*. In this study, the e-procurement system (NeST) moderates the relationship between institutional determinants and the effectiveness of APP implementation. If procurement officers perceive NeST as beneficial and easy to use, adoption rates increase, thereby improving implementation outcomes. Conversely, resistance or low digital literacy reduces its moderating potential (Lee et al., 2003).

2.2 Resource-Based Theory (RBT)

The Resource-Based Theory (Barney, 1991) posits that organisational performance depends on the ability to acquire and utilise valuable, rare, inimitable, and non-substitutable resources. In procurement, effective APP implementation relies on leadership capacity, compliance mechanisms, and stakeholder coordination—resources that drive institutional efficiency. When these internal and external resources are aligned, procurement performance improves (Grant, 1996).

Together, TAM and RBT provide a dual lens: RBT explains internal resource deployment, while TAM captures technological adoption behaviour. Their integration offers a comprehensive framework for understanding how institutional factors interact with digital systems to influence APP effectiveness.

3. METHODS

3.1 Research Design and Study Area

A cross-sectional design was adopted to collect data from Moshi Municipality, one of the LGAs in the Kilimanjaro region, characterised by diverse departments engaged in public procurement.

3.2 Population and Sampling

The study targeted employees in the Procurement Management Unit, Tender Board, Finance Department, and User Departments. Using Yamane's (1967) formula, a sample of 159 respondents was drawn from a population of 265, with 136 participating (85.5% response rate). Purposive sampling selected key informants, while simple random sampling was used for questionnaire distribution.

3.3 Data Collection Methods

Primary data were obtained through questionnaires and interviews, while secondary data were collected through document reviews. The questionnaire included Likert-scale items measuring top management support, legal framework, stakeholder engagement, e-procurement system, and APP effectiveness.

3.4 Validity, Reliability, and Ethical Considerations

Instrument validity was ensured through expert review, while reliability testing yielded a Cronbach's alpha of 0.82, indicating strong internal consistency. Ethical clearance was obtained from MoCU, and informed consent was secured from all participants.

3.5 Data Analysis

Quantitative data were analysed using descriptive statistics and multiple linear regression in SPSS to determine the relationships between the determinants and APP implementation effectiveness. Qualitative data from interviews were analysed thematically.

4. EMPIRICAL FINDINGS

4.1 Demographic Profile

Of 136 respondents, 58% were male and 42% were female. Most participants (62%) held bachelor's degrees, while 28% held Master's degrees. A majority (67%) had over five years of experience in public procurement.

4.2 Influence of Top Management Support

Regression results indicated that top management support significantly influenced APP effectiveness ($\beta = 0.514$, $p = 0.000$). Respondents cited leadership commitment, timely decision-making, and budget approvals as critical enablers of procurement success. However, the limited involvement of senior managers in monitoring and evaluation constrained the execution of APP.

4.3 Influence of Legal Framework

The legal framework had a positive and significant impact on APP implementation ($\beta = 0.386$, $p = 0.001$). Compliance with the Public Procurement Act and 2024 Regulations ensured standardisation and accountability. Nonetheless, respondents highlighted

challenges in interpreting complex provisions and inconsistent enforcement among departments.

4.4 Influence of Stakeholder Engagement

Stakeholder engagement showed a significant effect on APP effectiveness ($\beta = 0.427$, $p = 0.001$). Inclusion of suppliers, community representatives, and user departments improved requirement identification and reduced conflicts. However, inadequate consultation during planning phases limited inclusivity.

4.5 Moderating Effect of E-Procurement System

The e-procurement system (NeST) significantly moderated the relationships between the three determinants and APP implementation ($p = 0.001$). Integration of NeST improved transparency, reduced manual errors, and enhanced data traceability. However, challenges such as limited digital infrastructure, poor internet connectivity, and inadequate user training constrained optimal performance.

5. Discussion

The findings align with prior research emphasising the role of managerial commitment in public procurement success (Nzunda, 2024; Bhutto & Shaikh, 2023). Top management support ensures alignment between strategic goals and procurement operations, reinforcing RBT's assertion on the value of leadership resources.

The significance of legal frameworks is corroborated by studies by Chungalima and Mdee (2023), which highlight that adherence to procurement laws enhances efficiency and reduces malpractice. However, enforcement gaps reflect implementation inconsistencies common in developing countries.

Stakeholder engagement findings echo Kasanga et al. (2023) and Mkhize and Dlamini (2024), who found that participatory procurement enhances Trust and accountability. Nonetheless, managing conflicting interests requires structured mechanisms for engagement.

Finally, the moderating role of the e-procurement system supports the TAM perspective, showing that perceived usefulness and ease of use influence technology adoption (Davis, 1986). When effectively integrated, e-procurement enhances

transparency, reduces human errors, and strengthens institutional linkages (Jovinus, 2021; Okafor & Adebayo, 2021).

Overall, the study affirms that combining institutional support and digital innovation is essential for effective procurement governance.

6. CONCLUSION AND IMPLICATIONS

6.1 Conclusion

This study concludes that effective implementation of APPs in Moshi Municipality depends on robust managerial commitment, clear legal frameworks, active stakeholder participation, and the strategic use of e-procurement systems. The interaction of these factors determines procurement efficiency, transparency, and compliance.

6.2 Practical Implications

- For policymakers: Strengthen capacity-building programs for procurement officers on NeST use and simplify legal frameworks to facilitate easier compliance.
- For LGAs: Institutionalise regular stakeholder consultations and integrate APP monitoring into performance appraisals.
- For researchers: Future studies should use longitudinal designs to explore how digital maturity influences APP implementation over time.

6.3 Theoretical Contribution

The integration of TAM and RBT advances procurement literature by demonstrating how technological acceptance moderates the resource-based determinants of procurement effectiveness.

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