

The influence of key performance indicators on procurement effectiveness in local government authorities in Tanzania: A case of the Mwanza City Council

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ABSTRACT

This study was conducted to examine the influence of key performance indicators on procurement effectiveness in Tanzanian local government authorities, with Mwanza City Council as a case. It employed one dependent variable (improvement of procurement effectiveness) and three specific objectives (cost savings, quality assurance, and delivery timelines). The theory of stakeholders and lean theory guided the study. It also employed a case study-descriptive research design, with a sample of 86 respondents in MCC from a total population of 110, selected using stratified and judgmental sampling. Close-ended questionnaires were provided to respondents to answer the stated questions. Data were analyzed using descriptive and inferential statistics with the help of SPSS computer software and presented using tables with frequencies and percentages, as well as multiple linear regression analysis to determine the relationship between variables. The study findings indicate that cost savings significantly enhance the improvement of procurement effectiveness. Other results show that quality assurance influences procurement effectiveness and delivery timelines, while procurement effectiveness significantly influences revenue generation and customer satisfaction. The conclusion was made that key performance indicators were vital in influencing the improvement of procurement effectiveness in local government authorities. The study underscores that cost savings, quality assurance, and delivery timelines collectively have a positive relationship with more efficient and effective procurement processes in local government authorities. To sum up, the study recommended that the government should enhance the use of legal and regulatory frameworks governing procurement processes, facilitate investment in technology, and establish capacity-building programs. Also, local government authorities should embrace procurement key performance indicators so as to improve procurement effectiveness. Policy makers should establish data-driven decision-making as well as develop incentives for best practices, and further research should be carried out in other local governments to find out if the same results can be obtained.

Keywords: Key Performance Indicators, Local Government Authorities, Procurement Effectiveness, Tanzania

I. INTRODUCTION

Procurement can be considered as a wider term compared to purchasing, which implies the acquisition of goods, works and services in return for a monetary or equivalent payment. Also, it can be a process of obtaining goods, works or services in any way, such as purchasing, borrowing, leasing, renting and hiring (Van-Weele, 2010). Procurement process in public institutions is a fundamental goal of any government entity striving to deliver goods and services to its citizens, and it is expected that it provides a basic framework for the proper utilisation of resources (Wanyonyi & Tambo, 2018). Moreover, Glas and Eßig (2018) argued that apart from wealth generation, procurement can be included in other activities such as social development, cultural issues and environmental conservation. Procurement efficiency is crucial to achieving operational success and financial sustainability. All institutions that prioritise procurement efficiency can realise substantial cost savings, improve operational performance and achieve demand fulfilment (Fonseca & Azevedo, 2020). Procurement effectiveness and key performance indicators (KPI's) are two inseparable contents simply because the key performance indicators measure and improve efficiency and effectiveness in procurement processes (Rhodes et al., 2012).

Procurement effectiveness measurement is essential for a government function that has increasingly become complex in controlling a significant share of expenditures (up to 70%, as observed in Greece) and national gross domestic product (GDP) (up to 25%, as observed in the Netherlands) (OECD, 2013), and it continues to evolve both organizationally and conceptually. The concept of key performance indicators has captured the attention of all sides of business, industry and that of academics. A large number of academic articles being published in this area is a testimony to the high level of interest in key performance indicators issues (Callendar & Mathews, 2000).

Over the past years, the overall aim of the public sector's procurement is to ensure the effectiveness of public funds, which is frequently assessed in terms of how a public body spends less (economy), spends well (efficiency) and spends wisely (effectiveness). Almost 80% of the approved budget involves procurement issues. Procurement efficiency and effectiveness measurement in public sectors can sometimes be more difficult or complex, since some of

the selected indicators (KPI's) often fail to cope with the performance of procurement activities in public institutions (Patrucco et al., 2021). The government of the United Republic of Tanzania (URT) undertook various reforms that aimed at enhancing transparency and efficiency, and came up with several visions to be implemented by the local government authorities, including the development vision of 2025 to guide economic and social development efforts. This vision came up with several goals, such as high-quality livelihood, good governance and a competitive economy on the basis of the approved budget (Ndibalema, 2022).

Despite this development vision, the councils have still faced challenges that hinder the LGA's to achieve the best performance, leading to inefficiencies in procurement practices resulting in increased procurement cost and delays that ultimately affect service delivery to the community (Rugeiyamu, 2022). Tanzania's Local Government needs to add efforts in improving quality service delivery, increasing participation of stakeholders, creating a legal environment, cost minimisation, supplier relationship optimization, and clear separation of powers and functions between government and elected members.

It would be that the effective utilization and implementation of key performance indicators ensures the provision of a structured approach towards measuring and improving procurement effectiveness, since there is a growing understanding among various stakeholders concerning key performance indicators as the tools for performance monitoring and ensuring accountability in procurement activities. Ineffective implementation of key performance indicators in public sectors like Local Government Authorities prevents their ability to improve the overall procurement effectiveness. Previous researchers presented that by establishing clear performance metrics in procurement processes may help in identification of areas that needs improvements and make informed decisions to enhance procurement strategies resulting into the increase of organization performance by 72% (McGrath & MacMillan, 2016), while in Tanzania limited empirical researches have been carried out to reliably quantify the influence of key performance indicators on improvement of procurement effectiveness. Therefore, the current study aims to determine the influence of key performance indicators (KPI's), including cost savings, quality assurance, and delivery timeline, on the improvement of procurement effectiveness in Tanzania's Local Government Authorities, specifically in Mwanza City Council (MCC). Then this study aims to examine the influence of key performance indicators on procurement effectiveness in Local Government Authorities in Tanzania, with a specific focus on MCC. The research seeks to assess how cost savings, quality assurance, and delivery timelines contribute to improving procurement effectiveness

1.1 Research Objectives

To examine the influence of key performance indicators on procurement effectiveness in Local Government Authorities in Tanzania.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Stakeholders Theory

Stakeholders Theory, developed by Freeman et al. (2018), explains that institutions are not only accountable to shareholders but also to various stakeholders, including employees, customers, the government, and the entire society. This theory serves as a foundation for corporate decision-making. Consequently, organisations face the challenge of balancing the interests of various stakeholders to ensure that procurement strategies remain aligned with ethical principles and sustainability considerations.

Based on the Lean Theory as a functional model, which basically discounts the value of economies of scale and focuses on how to reduce costs as a result of small, incremental and continuous improvement, Lean operations have certainly become increasingly significant in cost management. Initially organizations involved in the manufacturing of products used to involve themselves in lean manufacturing techniques; this has ceased as lean has expanded beyond manufacturing (Fawcett et al., 2014). Lean operations law seeks to explain how an organisation should manage its procurement system and needs. It states that procurement can be used as a strategic differentiator by the organization and further goes on to say that not all procurement is about waste (Finch, 2014).

The theory stated that "procurement strategies developed by an organization should support the customer's needs and expectations" Procurement strategies should not be a driver for how much and when a product will be delivered to a customer; rather, the customers' expectations should be understood, and transport strategies are designed purposely to meet those expectations. Real savings can only be realized through day-to-day management and optimization of operational requirements. This therefore implies that the cost associated with procurement cannot be achieved through inconsistent procurement network designs (Fisher, 2016). This theory is related to the study on the influence of Key Performance Indicators on the improvement of Procurement effectiveness, because Cost management is a key component in efficient and effective performance of procurement.

2.2 Empirical Review

Ahsan and Paul (2018) conducted a study on the performance evaluation of procurement systems in the ICT industry, a case study of Network Hardware Solutions Limited in Bangladesh. The study focused on the performance of procurement of ICT industries of Bangladesh and tried to improve that performance by measuring through some KPI considered and ranked them through a survey. KPI'S that were considered are procurement cycle time, product price variations, effective contract utilization, payment processing time and procurement cost. In this study, primary data were collected through the survey, interviews and expert opinions and secondary data of the study were obtained from a wide range of articles and proceedings papers from different internationally reputed journals. The findings concluded that purchasing performance could equally be measured using both financial and non-financial measures, so organizations with established performance measures for their procedures, processes, and plans experience lower customer dissatisfaction. The described KPI's of procurement, in this study was beneficial to monitor and improve the performance of procurement of an ICT-based company, which turned into an improvement of the company. It was also recommended that evaluating procurement performance should be carried out periodically, and respective course of action should be taken to strengthen the efficiency of the supply chain of the ICT company.

Ritah (2022) studied the impact of procurement practices on the performance of Local governments in Uganda, a case of Bugiri district. The study focused on specific objectives, including customer orientation, strategic supplier partnerships, and information sharing. A descriptive design involving both qualitative and quantitative approaches was employed. The study comprised 48 respondents from the procurement and finance departments. The findings revealed that there was a positive relationship between procurement practices and the performance of Bugiri district. The study concluded that information sharing and knowledge management were the common modes of procurement that were practised at the local government. The study also recommended that there is a need for the local government to prioritise customer orientation. This could be achieved by building strong buyer-supplier relations, which will eventually lead to timely deliveries within the local government. The study also recommended that there's a need for the local government to enhance strategic supplier partnerships by creating long-term supplier partnership which will help to cut costs.

Ndemo and Achuora (2020) studied the influence of Key Performance Indicators on the performance of State Agencies in Kenya. The study aimed to examine the influence of Key Performance Indicators on the performance of State Agencies in Kenya, with four independent variables, which were cost management, quality management, delivery management and asset utilization management. The study employed a case study-descriptive design and a mixed approach to collect both qualitative and quantitative data. The collected data were analyzed using Multiple regression analysis and the Statistical Package of Social Science (SPSS), respectively. The findings of the study indicated that cost management, quality index management, delivery management and asset utilization management have a positive relationship with the performance of State Agencies in Kenya. Thus, the study recommended that public institutions should embrace procurement key performance indicators so as to improve performance, and further research should be carried out in other public institutions to find out if the same results can be obtained.

Sama and Mwalukasa (2024) conducted a study on the factors influencing procurement performance in public institutions in Tanzania, A Case of Bahi District Council, Tanzania. The study focused on four specific objectives, such as annual procurement planning, financial resources, staff competence and organisational structure. The study also employed a case study-descriptive design and used questionnaires and documentary reviews in the collection of data. The findings presented that annual procurement planning, financial resources, staff competence and organizational structure influence procurement performance at GPSA. Therefore, the study recommended that the government should allocate sufficient funds in a timely manner when requested to facilitate procurement activities in public institutions, customizing the procurement policies to relate to the nature of procurement and also to facilitate smooth compliance, efficient evaluation to obtain the right supplier and to provide regular training to increase staff competence so as to add value in organizational procurement performance.

Mgawe and Kiwango (2023). Studied the effectiveness of procurement planning on procurement performance of public organisations in Tanzania. A case study of Babati District Council. Specifically, the study sought to assess the procurement need assessment, procurement budgeting and procurement method on procurement performance. The study adopted a descriptive research design, which allowed a detailed description and analysis of the variables under study. The study employed a mixed approach with simple random sampling and purposive sampling techniques, also the study used questionnaires and interviews as the Field data collection instruments. The findings of the study concluded that procurement needs assessment, procurement budgeting and procurement method have a positive and significant relationship with procurement performance of the Babati District Council Headquarters. The recommendations were made that the Government should enable the key stakeholders in the procurement process, such as Tender Board Members, Procurement management unit, User department, by providing training on procurement matters to ensure effectiveness in procurement.

This study needs to be researched so as to gain several ideas for the organizations to work better in procurement practices by focusing mostly in increasing efficiency and effectiveness in procurement processes. In

reference to the previous studies by Ritah (2022), Ndemo and Achuora (2020), Sama & Mwalukasa, (2024), as well as Mgawe and Kiwango, (2023), who came up with several conclusions and recommendations concerning procurement effectiveness and performance. The researcher found a knowledge gap due to inadequate existing research on this phenomenon since most of the studies focused on determinants of procurement performance in public sectors and theoretical gaps because most of the studies used agency theory, stakeholders' theory and institutional theory. This shows a need to examine the influence of those factors on the improvement of Procurement effectiveness in public institutions, in consideration of stakeholder theory and Resource base d-view theory. Therefore, to address these gaps, this study examined the influence of Key Performance Indicators on the improvement of Procurement effectiveness in Tanzania's Local Government Authorities, specifically at Mwanza City Council.

III. METHODOLOGY

3.1 Research design

The researcher adopted a case- study descriptive research design that made it easier to acquire the required data effectively since the researcher focused on one institution to gain a thorough study of the problem and provide a systematic description that is factual and accurate to give a complete summary of the study findings. Quantitative data were collected from primary sources, and qualitative data were obtained from secondary sources.

3.2 Study Area and Targeted Population

This study was conducted in Mwanza City Council. Although Mwanza City Council has a large population size of 4300 individuals working in different departments. (Website: www.mwanza.cc.go.tz, 2025). Thus, the researcher decided to focus only on the target population of 110 respondents who work in departments that met the purpose or objectives of the study, including the managers and the employees of Mwanza City Council, categorised in departments including Procurement Management Units, Accounting and Finance Department, Internal Audit department, Suppliers and User departments.

3.3 Sample and Sample Size

In this study, a sample size was selected by a researcher from a target population of 110 respondents with representatives from various departments in Mwanza City Council. A sample size was selected in this study from a target population of 110 respondents with representatives from various departments in Mwanza City Council. However, the Yamane (1967) formula was employed to obtain a sample size to be employed in this study. By using the formula (Yamane, 1967), the sample will be determined as follows: -

From the formula;

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

Where: n=sample size, N=population size =110, e=Margin of error (the 95% confidence level) =0.05

$$n = \frac{110}{1 + 100(0.05)^2}$$

Thus, the sample size (n) is 86.

3.4 Data Analysis

Data was analyzed with the support of the Statistical Package of Social Science (SPSS) software in the arrangement and analysis of data. Also, data was presented using tables with frequencies and percentages that allow the researcher to perform a strong quantitative comparative analysis of the responses by comparing issues of similarity and dissimilarity between responses. The study determined how strongly the dependent and independent variables relate using the regression analysis technique, specifically the Multiple regression analysis that was essential for assessing the strengths of the relationship between the three continuous independent variables and one continuous dependent variable.

From; The multiple regression analysis formula

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

Where, Y- Dependent variable (Procurement effectiveness)

β_0 -Regression coefficient

β_1, β_2 and β_3 – Slopes of the regression equation

X1- Cost savings

X2- Quality assurance

X3- Delivery timelines

a- An error term normally distributed about a mean of 0

For computation, the a is assumed to be 0.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 The Influence of Cost Savings on the Improvement of Procurement Effectiveness

In this objective, the study aimed at determining the influence of cost savings on the improvement of procurement effectiveness through its aspects, which were (cost avoidance, cost reduction and spend under management). The respondents were asked to rate their levels of agreement or disagreement on a Likert scale in which the rate was in five levels ranged from strongly disagree to strongly agree on which procurement effectiveness is influenced by cost savings.

Cost Avoidance: Cost avoidance in the institution covers a proactive strategy aimed at eliminating or minimising future expenses through preventive actions. Effective cost avoidance strategies help organisations manage their financial health through the reduction of potential future expenditures. The study asked respondents about cost avoidance by indicating their level of agreement or disagreement with each of the given statements. *Cost is avoided through facilitating long-term pricing contracts:* the study wanted to determine the level at which cost is avoided through facilitating long-term pricing contracts at Mwanza City Council (MCC).

Table 1

Response to Cost Avoidance through Facilitating Long-Term Pricing Contracts

Response	Frequency	Percent
Strongly Disagree	6	7.0
Disagree	4	4.7
Neutral	7	8.1
Agree	46	53.5
Strongly Agree	23	26.7
Total	86	100.0

The study findings revealed that cost avoidance is avoided through facilitating long – term pricing contracts as respondents indicated their level of agreement or disagreement whereby, 7.0% of the respondents strongly disagree, 4.7% of the respondents disagree, 8.1% of the respondents were neutral, 53.5% of the respondents agree while 26.7% of the respondents strongly agree that, through facilitating long – term pricing contracts cost can be effectively avoided. *Cost is avoided by encouraging the use of alternative goods or services:* The study aimed at examining whether the cost is avoided by encouraging or not encouraging the use of alternative goods and services at Mwanza City Council (MCC).

Table 2

Response to Cost Avoidance by Encouraging the use of Alternative Goods or Services.

Response	Frequency	Percent
Strongly Disagree	7	8.1
Disagree	6	7.0
Neutral	16	18.6
Agree	39	45.3
Strongly Agree	18	20.9
Total	86	100.0

The study findings in other ways aimed to know the respondents' level of agreement or disagreement in terms of cost avoidance by encouraging the use of alternative goods or services. The study findings through questionnaire distributed to the respondents revealed different level of agreement or disagreement as 8.1% of the respondents strongly disagree that cost is not avoided by encouraging the use of alternative goods or services, 7.0% of the respondents disagree, 18.6% of the respondents were neutral, 45.3% of the respondents agree and 20.9% of the respondents strongly agree that cost is avoided by encouraging the use of alternative services or goods at MCC.

Cost reduction: In the institution, cost reduction is about making smarter decisions about how and where to spend money. Effective cost reduction strategies require careful planning, communication, and continuous monitoring to avoid unintended consequences. The study asked respondents about cost avoidance by indicating their level of agreement or disagreement with each of the given statements. Cost is reduced by enhancing competitive bidding among suppliers to obtain goods and services at a reasonable price. The study aimed at determining whether the cost is reduced by enhancing competitive bidding or by not enhancing the competitive bidding among suppliers to obtain goods and services at a reasonable price in the Mwanza City Council (MCC).

Table 3
Cost Reduction

Response	Frequency	Percent
Strongly Disagree	9	10.5
Disagree	6	7.0
Neutral	9	10.5
Agree	48	55.8
Strongly Agree	14	16.3
Total	86	100.0

The study through questionnaires distributed to the respondents revealed different level of agreements or disagreements as 10.5% of the respondents strongly disagree, 7.0% of the respondents disagree, 10.5% of the respondents were neutral, 55.8% of the respondents agree while 16.3% of the respondents strongly agree that cost can be reduced by enhancing competitive binding among suppliers to obtain goods and services at a reasonable price in MCC. This implies that the institution manages expenses through enhancing competitive bidding processes. Cost is reduced through carrying out procurement of goods, works and services within the planned budgets to minimise extra costs. The study aimed at examining the extent to which the cost is reduced by carrying out procurement of goods, works and services within the planned budgets to minimise extra costs at Mwanza City Council (MCC).

Table 4

Cost Reduction	Frequency	Percent
Strongly Disagree	7	8.1
Disagree	21	24.4
Neutral	9	10.5
Agree	30	34.9
Strongly Agree	19	22.1
Total	86	100.0

The study also aimed to obtain the respondents' level of agreement or disagreement on whether the cost is reduced or not reduced through procurement of goods, works and services within the planned budgets to minimize extra costs. The questionnaires distributed to respondents revealed that, 8.1% of the respondents were strongly disagree, 24.4% of the respondents disagree, 10.5% of the respondents were neutral, 34.9% of the respondents agree while 22.1% of the respondents strongly agree that, procurement of goods, works and services are carried out within the planned budgets to minimize extra costs, hence cost reduction at MCC.

4.1.2 Spend Under Management

In the institution, spending under management is a critical measure of the total expenditure that is actively controlled, monitored and optimised through formal procurement processes. It is essential for institutions aiming to enhance financial efficiency and achieve significant cost savings. The study asked respondents about cost avoidance by indicating their level of agreement or disagreement with each of the given statements. Planned budgets oversee institutional expenditures: The study wanted to determine the extent to which planned budgets oversee institutional expenditures at Mwanza City Council (MCC).

Table 5
Spend under Management

Response	Frequency	Percent
Strongly Disagree	7	8.1
Disagree	4	4.7
Neutral	20	23.3
Agree	36	41.9
Strongly Agree	19	22.1
Total	86	100.0

The study finding indicates that, 8.1% of the respondents strongly disagree, 4.7% of the respondents disagree suggesting some levels of dissatisfaction about the effectiveness of planned budgets in overseeing expenditures, 23.3% of the respondents remain neutral indicating that no strong opinion either way, 41.9% of the respondents agree while 22.1% of the respondents strongly agree that planned budgets effectively oversee institutional expenditures at MCC. Procurement under management enhances savings opportunities. The study aimed at determining the level of

agreement or disagreement on whether procurement under management enhances saving opportunities or procurement under management does not enhance saving opportunities at Mwanza City Council (MCC).

Table 6*Spend under Management*

Response	Frequency	Percent
Strongly Disagree	5	5.8
Disagree	7	8.1
Neutral	6	7.0
Agree	16	18.6
Strongly Agree	52	60.5
Total	86	100.0

The study findings revealed that 5.8% of the respondents strongly disagree, 8.1% of the respondents disagree, 7.0% of the respondents were neutral, 18.6% of the respondents agree, while 60.5% of the respondents strongly agree that procurement under management enhances saving opportunities at MCC. Therefore, this suggests that a substantial number of respondents strongly agree or agree that effective procurement under management leads to cost savings. Also, the majority of the respondents support that the institution may benefit from managing procurement strategies to optimise its spending and achieve cost efficiencies.

4.1.2 The Influence of Quality Assurance on the Improvement of Procurement Effectiveness

In this objective, the study aimed at determining the influence of quality assurance on the improvement of procurement effectiveness through its aspects, which were (conformance to specifications, consistency within control limits and risk management). The respondents were asked to rate their levels of agreement or disagreement on a Likert scale in which the response was on five levels, from strongly disagree to strongly agree, on whether procurement effectiveness is influenced by quality assurance. Conformance to specifications. This concept indicates whether a product or service adheres to specified standards. It is often used to measure quality assurance. Therefore, maintaining high levels of conformance is essential for institutional success. The study asked respondents about conformance to specifications by indicating their level of agreement or disagreement with each of the given statements. Procured goods, works and services meet specified standards. The study aimed at determining the level of agreement or disagreement on whether procured goods, works, and services meet or do not meet specified standards at Mwanza City Council (MCC).

Table 7*Conformance to specifications*

Response	Frequency	Percent
Strongly Disagree	3	3.5
Disagree	4	4.7
Neutral	17	19.8
Agree	17	19.8
Strongly Agree	45	52.3
Total	86	100.0

The study, through Table 7 above, obtained that 3.5% of the respondents strongly disagree, 4.7% of the respondents disagree, 19.8% of the respondents remained neutral, 19.8% of the respondents agree, and 52.3% of the respondents strongly agree. Based on these findings, it was found that there is a strong perception among respondents from MCC regarding the conformance of procured goods and services to specified standards. Rigorous testing protocols (inspection and evaluation) are implemented at various stages. The study aimed at identifying the level of agreement or disagreement on whether rigorous testing protocols (inspection and evaluation) are implemented or not implemented at various stages of procurement processes at Mwanza City Council (MCC).

Table 8*Conformance to specifications*

Response	Frequency	Percent
Strongly Disagree	2	2.3
Disagree	4	4.7
Neutral	13	15.1
Agree	25	29.1
Strongly Agree	42	48.8
Total	86	100.0

The study through Table 8 above indicates that, 2.3% of the respondents strongly disagree, 4.7% of the respondents disagree, 15.1% of the respondents were neutral, 29.1% of the respondents agree while 48.8% of the respondents strongly agree that rigorous testing protocols (inspection and evaluation) are implemented at various procurement stages at MCC. By assessing the extent to which such protocols are followed, the study sought to understand their role in minimizing defects, reducing rework costs, and improving overall procurement reliability and accountability.

4.2 Consistency within Control Limits

This is essential to the institutions since it ensures that a process operates within a stable and predictable range. Also, through understanding control limits organizations can improve quality management and make informed decisions about process improvements and adjustments. The study asked respondents about conformance to specifications by indicating their level of agreement or disagreement with each of the given statements. Control limits facilitate early detection of variations that indicate potential problems in procurement processes. The study aimed to determine the level of agreement or disagreement on whether control limits facilitate or do not facilitate early detection of variations that indicate potential problems in procurement processes at Mwanza City Council (MCC).

Table 9*Consistency within Control Limits*

Response	Frequency	Percent
Strongly Disagree	6	7.0
Disagree	3	3.5
Neutral	8	9.3
Agree	54	62.8
Strongly Agree	15	17.4
Total	86	100.0

Table 9 above indicates that 7.0% of the respondents strongly disagree, 3.5% of the respondents disagree, 9.3% of the respondents were neutral, 62.8% of the respondents agree, while 17.4% of the respondents strongly agree that control limits facilitate early detection of variations, which indicates potential problems in procurement processes at MCC. Consistent operation within control limits ensures procurement practices meet pre-defined quality standards. The study aimed at examining the level of agreements or disagreements on whether consistent operation within control limits ensures that procurement practices meet pre-defined quality standards at Mwanza City Council (MCC).

Table 10*Consistency within Control Limits*

Response	Frequency	Percent
Strongly Disagree	4	4.7
Disagree	4	4.7
Neutral	13	15.1
Agree	33	38.4
Strongly Agree	32	37.2
Total	86	100.0

The researcher obtained findings such as 4.7% of the respondents strongly disagree, 4.7% of the respondents disagree, 15.1% of the respondents remained neutral, 38.4% of the respondents agree, 37.2% of the respondents strongly agree that consistent operation within control limits ensures procurement practices meet pre-defined quality standards at Mwanza City Council (MCC).

4.2.1 Risk Management

This involves a series of steps that an institution takes to minimize negative effects of unforeseen events while maximising various opportunities. Effective risk management involves a cyclical process where organizations continuously identify, assess, respond to and monitor risks so as to safeguard their operations against potential threats while optimizing performance. The study asked respondents about risk management by indicating their level of agreement or disagreement with each of the given statements. Compliance with quality standards minimizes possibilities of non-compliance risk occurrence. The study aimed at determining the level of agreement or disagreement on either compliance with quality standards minimizes or doesn't minimize possibilities of non-compliance risk occurrence at Mwanza city council (MCC).

Table 11

Risk Management

Response	Frequency	Percent
Strongly Disagree	4	4.7
Disagree	12	14.0
Neutral	12	14.0
Agree	36	41.9
Strongly Agree	22	25.6
Total	86	100.0

The study findings indicate that 4.7% of the respondents strongly disagree, 14.0% of the respondents disagree, 14.0% of the respondents were neutral, 41.9% of the respondents agree, 25.6% of the respondents strongly agree that compliance with quality standards minimizes possibilities of non-compliance risk occurrence to manage risks at MCC. Meeting high-quality standards reduces the likelihood of failures or defects. The study aimed to determine whether meeting high-quality standards reduces or does not reduce the likelihood of failures or defects. To gather these insights, questionnaires were distributed to the respondents, and the responses revealed varying levels of agreement regarding the impact of quality standards on minimizing procurement failures and defects at MCC.

Table 12

Risk Management

Response	Frequency	Percent
Strongly Disagree	3	3.5
Disagree	6	7.0
Neutral	19	22.1
Agree	23	26.7
Strongly Agree	35	40.7
Total	86	100.0

The study finding obtained that, 3.5% of the respondents strongly disagree that, meeting high quality standards reduces the likelihood of failures or defects, 7.0% of the respondents disagree, 22.1% of the respondents were neutral, 26.7% of the respondents agree, 40.7% of the respondents were strongly agree on meeting high quality standards reduces the likelihood of failures or defects at MCC.

4.2.2 The Influence of Delivery Timelines on the Improvement of Procurement Effectiveness

In this objective, the study aimed to examine the influence of delivery timelines on the improvement of procurement effectiveness. The study sought to examine how timely delivery of goods and services impacts the improvement of procurement effectiveness by using aspects such as Purchase order cycle time, On-time delivery performance as well as Lead time index. To gather relevant data, questionnaires were distributed to the respondents to rate their level of agreement or disagreement. The responses provided valuable insights into how delivery schedules contribute to or hinder the effectiveness of procurement operations in the institution.

Purchase order cycle time: This is a critical measure of procurement cycle time calculated as the time from receipt of purchase requisition line item to the transmission of purchase order to the supplier. Several institutions have successfully optimized their purchase order cycle time by implementing automated purchase order software and reviewing and updating purchase order policy. The study asked respondents on purchase order cycle time by indicating their level of agreement or disagreement with each of the given statements. Order cycle time is streamlined: he study aimed to determine whether the order cycle time is streamlined or not streamlined. To gather these insights, questionnaires were distributed to the respondents, and the responses provided valuable insights into how order cycle time contributes to or hinders the effectiveness of procurement operations at MCC.

Table 13*Purchase Order Cycle Time*

Response	Frequency	Percent
Strongly Disagree	5	5.8
Disagree	5	5.8
Neutral	4	4.7
Agree	42	48.8
Strongly Agree	30	34.9
Total	86	100.0

The study findings obtained that 5.8% of the respondents strongly disagree, 5.8% of the respondents disagree, 4.7% of the respondents were neutral, 48.8% of the respondents agree on order cycle time is streamlined, and 34.9% of the respondents strongly agree that the order cycle time is streamlined at MCC. Planning and forecasting are done to enable better scheduling and reduce delays. The study also aimed to determine whether planning and forecasting are effectively implemented to enable better scheduling and reduce delays. Through ensuring that procurement processes are well-planned and accurately forecasted, organizations can improve efficiency and avoid disruptions. To gather relevant data, questionnaires were distributed to the respondents to rate their levels of agreement or disagreements and the responses provided valuable insights into the effectiveness of planning and forecasting practices at MCC.

Table 14*Purchase Order Cycle Time*

Response	Frequency	Percent
Strongly Disagree	5	5.8
Disagree	4	4.7
Neutral	11	12.8
Agree	43	50.0
Strongly Agree	23	26.7
Total	86	100.0

The study found that 5.8% of respondents strongly disagreed, 4.7% disagreed, 12.8% were neutral, 50.0% agreed, and 26.7% strongly agreed that planning and forecasting are effectively implemented to enable better scheduling and reduce delays at MCC. On-time delivery performance: On-time delivery performance is a critical metric that measures the percentage of how effectively and efficiently delivery operations are handled within the promised timeframe. It is a measure of the success rate in meeting expectations and ensuring timely and accurate deliveries, reflecting the efficiency and reliability of public service delivery. It directly affects citizen satisfaction, operational efficiency and accountability. The study asked respondents about the issue of on-time delivery performance by indicating their level of agreement or disagreement with each of the given statements. Goods and services are received on time and complete: The study aimed at determining the level of agreement or disagreement on whether goods and services are received or not received on time and completed at the Mwanza City Council (MCC).

Table 15*On-Time Delivery Performance*

Response	Frequency	Percent
Strongly Disagree	7	8.1
Disagree	9	10.5
Neutral	2	2.3
Agree	32	37.2
Strongly Agree	36	41.9
Total	86	100.0

The study finding obtained that, 8.1% of the respondents strongly disagree, 10.5% of the respondents disagree, 2.3% of the respondents remained neutral, 37.2% of the respondents agree, 41.9% of the respondents were strongly agree on goods and services are received on time and complete at MCC. Delivery performance is affected by external factors such as transportation challenges and regulatory changes. The study aimed at determining the level of agreements or disagreements on whether delivery performance is affected or not affected by external factors such as transportation challenges and regulatory changes, these external influences can significantly impact the timeliness and reliability of procurement activities at Mwanza city council (MCC).

Table 16*On-Time Delivery Performance*

Response	Frequency	Percent
Strongly Disagree	4	4.7
Disagree	6	7.0
Neutral	9	10.5
Agree	31	36.0
Strongly Agree	36	41.9
Total	86	100.0

The study findings revealed that, 4.7% of the respondents strongly disagree, 7.0% of the respondents disagree, 10.5% of the respondents were neutral, 36.0% of the respondents agree, 41.9% of the respondents strongly agree that delivery performance is affected by external factors including transportation and regulatory changes at MCC.

4.2.3 Lead Time Index

This is essential for the provision of valuable insights into the efficiency of procurement processes in the institution. By analysing the lead time index, the institutions can identify areas for improvement and optimize their procurement processes. The study asked respondents on the issue of on-time delivery performance by indicating their level of agreement or disagreement with each of the given statements. The institution optimizes its operations, such as inventory management to shorten lead times. The study aimed at determining the level of agreement or disagreement on whether the institution optimises its operations, such as inventory management, so as to shorten lead times and improve procurement efficiency. The responses revealed varying levels of agreement regarding the effectiveness of operational optimization in reducing lead times, as presented in the table below.

Table 17*On- Lead Time Index*

Response	Frequency	Percent
Strongly Disagree	13	15.1
Disagree	11	12.8
Neutral	2	2.3
Agree	38	44.2
Strongly Agree	22	25.6
Total	86	100.0

The study findings obtained that, 15.1% of the respondents strongly disagree, 12.8% of the respondents disagree on the institution optimizes its operations such as inventory management to shorten lead times, 2.3% of the respondents were neutral, 44.2% of the respondents agreed on the institution optimizes its operations such as inventory management to shorten lead times while 25.6% of the respondents strongly agree that the institution optimizes its operations such as inventory management to shorten lead times at MCC. Lead time reduction strategies are employed to minimize lead time from order placement to order fulfilment. The study aimed to know respondents' level of agreement or disagreement on whether lead time reduction strategies are employed or not to minimize lead time from order placement to order fulfilment. Through a questionnaire distributed to the respondents, responses were obtained as presented below:

Table 18*Lead Time Index*

Response	Frequency	Percent
Strongly Disagree	6	7.0
Disagree	5	5.8
Neutral	13	15.1
Agree	26	30.2
Strongly Agree	36	41.9
Total	86	100.0

The study findings obtained that 7.0% of the respondents strongly disagree, 5.8% of the respondents disagree, 15.1% of the respondents were neutral, 30.2% of the respondents agree, 41.9% of the respondents were strongly agree



on lead time reduction strategies are employed to minimize lead time from order placement to order fulfilment at MCC.

4.3 Multiple Regression Analysis

This is a method of observing and studying the relationship between multiple independent variables and a dependent variable (Sun et al., 2023). In this study the aim of using multiple regression analysis is to use the predictor variables whose values are known to predict the dependent value chosen in the study. Each predictor variable is weighted by regression model to ensure the maximal prediction from the set of predictor variables.

Table 19

Model Summary

Model Summary				
Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.858 ^a	.668	.632	.70146

a. Predictors: (Constant), Delivery timelines, Cost savings, Quality assurance

The model summary above presents key statistics from a regression analysis that evaluates the relationship between predictors (cost savings, quality assurance and delivery timelines and a dependent variable (improvement of procurement effectiveness), where the R value (Correlation Coefficient) is 0.0858, indicating a strong positive relationship between the predictors and the dependent variable. A value close to 1 suggests that the increase in predictors results in the increase in the dependent variable. The R-squared value (Coefficient of Determination) is 0.668, which means approximately 66.8% of the variance in the dependent variable can be explained by the three predictors included in the model. This is a substantial proportion, indicating that these factors are important in predicting outcomes related to the dependent variable. The adjusted R square is reported as 0.632 this statistic adjusts for the number of predictors in the model and provides a more accurate measure when comparing models with different numbers of predictors.

The standard error of estimate is given as 0.70146. this statistic measures the average distance that observed values fall from the regression line, it provides insights into how well the model predicts actual outcomes. A smaller standard error relative to the range of data indicates better predictive accuracy. Therefore, this model indicates a strong relationship among cost savings, quality assurance and delivery timelines with an R value of 0.668, suggesting these factors explain approximately 66.8% of variance in outcomes related to the dependent variable (improvement of procurement effectiveness).

Table 20

ANOVA^a

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.592	3	2.197	2.159	.000 ^b
	Residual	84.466	83	1.018	.109	
	Total	91.057	86			

a. Dependent Variable: Improvement of procurement effectiveness

b. Predictors: (Constant), Delivery timelines, Cost savings, Quality assurance

The ANOVA table above shows the test of the overall statistical significance of the regression model. It determines whether the predictors (cost savings, quality assurance and delivery timeline) collectively explain a significant amount of the variation in the dependent variable (improvement of procurement effectiveness). The regression sum of squares is 6.592 with 3 degrees of freedom, resulting in a mean square of 2.197. The residual sum of squares is 84.466 with 83 degrees of freedom, resulting in a mean square of 1.018 and the total sum of squares is 91.057 with 86 degrees of freedom. The calculated F-statistic is 2.159 (2.197/1.018=2.159). The significance value (p-value) associated with F-statistic is .000, the overall regression model is statistically significant (F (3,83) =2.159, p<.001).

Conclusively, based on the provided ANOVA table, the overall regression model is statistically significant. Since the p-value (Sig.=.000) less than the conventional significance level of 0.05. This means that the predictor variables collectively explain a statistically significant portion of the variance in the improvement of procurement effectiveness.

Table 12
Coefficients^a

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.964	.768		.254	.213
	Cost savings	.376	.147	.371	.654	.000
	Quality assurance	.443	.187	.270	.365	.000
	Delivery timelines	.003	.108	.003	.027	.078

Dependent Variable: Improvement of procurement effectiveness

From the coefficient estimates of the study table above, the unstandardized estimates present a constant value of 0.964 with a standard error of 0.768. This suggests that when all predictors are 0, the expected improvement of procurement effectiveness is approximately 0.964. The cost saving value is 0.376 with a standard error of 0.147. This indicates that for every unit increase in cost savings, the improvement in procurement effectiveness increases by approximately 0.376 units, holding other variables constant. Also, the quality assurance value is 0.443 with a standard error of 0.187. This suggests that for every unit increase in quality assurance, the improvement in procurement effectiveness increases by approximately 0.443 units, holding other variables constant. And, the delivery timelines value is 0.003 with a standard error of 0.108. This indicates that changes in delivery timelines have a negligible effect on the improvement in procurement effectiveness.

The standardized coefficients (Beta), allows a comparison of the relative importance of each independent variable. For cost savings, Beta value is 0.371, suggesting that it has a positive impact on improving procurement effectiveness compared to other variables. The quality assurance's standardized coefficient value is 0.270, indicating that it contributes positively on improving procurement effectiveness and lastly is the delivery timeline's standardized coefficient value that is only 0.003, which implies that it has a less significant effect on improving procurement effectiveness compared to other two variables.

The t-statistics and significance levels (Sig.) determines whether the coefficients are statistically significant or not. For cost savings with a t-value of .654 and a p-value of .000, indicates that it is a statistically significant predictor on the improvement of procurement effectiveness. The quality assurance with a t-value of .365 and a p-value of .000 indicates that quality assurance significantly predicts the improvements in procurement effectiveness. Also, for delivery timelines with a t-value of .027 and a p-value of .078 suggests that delivery timelines is less significant in predicting the improvements in procurement effectiveness. Thus, it can be considered as a statistically insignificant. In conclusion, both cost savings and quality assurance are statistically significant positive predictors of improvement of procurement effectiveness. In contrast, delivery timelines do not appear to have less impact on the improvement of procurement effectiveness. Hence, focusing on enhancing cost savings and quality assurance will likely enable better results in improving effectiveness in procurement processes.

4.3 Discussion

4.3.1 The Influence of Cost Savings on the Improvement of Procurement Effectiveness

The study findings revealed that cost savings significantly enhance procurement effectiveness in Local Government Authorities such as Mwanza City Council (MCC) by ensuring the optimal use of limited public resources. These findings are similar with Udoba and Mwalukasa (2024), who conducted the study in Mbinga district. Through the facilitation of long-term pricing contracts, MCC avoids the volatility of prices to achieve predictable expenditure, thereby reducing unnecessary future costs supported by (Rane et al., 2023). However, promoting the use of alternative goods or services that meet the same specifications but at lower costs ensures value for money while maintaining quality. Competitive bidding can also reduce procurement expenses by attracting multiple suppliers, which fosters better pricing and on-time service delivery. Through conducting procurement activities strictly within planned budgets, MCC minimises the risk of financial mismanagement and controls over-expenditure supported by (Mgawe & Kiwango, 2023). These planned budgets play a vital role in overseeing institutional spending, ensuring accountability and transparency. Moreover, when procurement processes are strategically managed, they give chances to more opportunities for savings through well-informed decision-making and timely acquisitions. Collectively, these cost-saving measures not only improve procurement efficiency but also reinforce fiscal discipline and public trust in the local government authority's operations.

4.3.2 The Influence of Quality Assurance on the Improvement of Procurement Effectiveness

The study findings revealed that quality assurance plays a critical role in enhancing procurement effectiveness in Local Government Authorities, specifically Mwanza City Council (MCC), by ensuring that procured goods and

services meet the required standards and specifications. The findings are similar to those of Mgawe and Kiwango (2023), who assessed the effectiveness of Effectiveness of Procurement Planning on Procurement Performance of Public Organizations in Tanzania. Rigorous testing protocols, including inspections and evaluations at various stages of the procurement process, ensure that only products and services that meet predefined quality criteria are accepted as supported by (Adebayo et al., 2024). The use of control limits helps in the early detection of deviations or variations, allowing potential problems to be addressed promptly before they arise. Through consistently operating within these established control limits, the institutions can ensure that procurement practices adhere to high-quality standards, minimising the risk of non-compliance. Compliance with these quality standards reduces the likelihood of defects, failures or poor performance of the procured items, ultimately leading to improved operational efficiency, reduced costs associated with rework or replacements, and enhanced public trust in the local government's ability to manage resources effectively.

4.3.3 The Influence of Delivery Timeline on Improvement of Procurement Effectiveness

The study findings obtained that the delivery timeline significantly influences procurement effectiveness in Local Government Authorities like Mwanza City Council (MCC) by streamlining the order cycle time, ensuring that goods and services are received on time and complete as per specifications (Anane et al., 2019; Islam et al., 2021; Sumardi & Fernandes, 2020). Effective planning and forecasting enable better scheduling, reducing delays and minimizing the risk of project disruptions (Hassan, 2025). Through optimising inventory management, MCC shortens lead times, making the procurement process more efficient. However, external factors such as transportation challenges and regulatory changes can affect delivery performance, requiring continuous monitoring and adaptation. Through implementing lead time reduction strategies, such as improving supplier relationships and enhancing internal processes, the institutions can minimize the time from order placement to order fulfilment. This ensures that procurement operations are more responsive, cost-effective, and aligned with the institution's goals, ultimately leading to improved service delivery and resource utilization in the institution.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study revealed that the majority of respondents either agreed, remained neutral, or strongly agreed that cost savings significantly influence the improvement of procurement effectiveness in Local Government Authorities, particularly at Mwanza City Council (MCC). Respondents recognized that procurement practices such as long-term pricing contracts, the use of alternative goods or services, and competitive bidding contribute to cost reduction. These strategies ensure that goods, works, and services are procured within planned budgets, thereby avoiding unnecessary expenditures and promoting financial accountability and efficiency within the procurement process.

Furthermore, the study found that quality assurance plays a crucial role in enhancing procurement effectiveness. Most respondents supported the idea that ensuring procured goods and services meet specified standards, and conducting rigorous inspections and evaluations at various stages, leads to improved outcomes. The use of control limits and strict adherence to quality standards were viewed as essential in minimizing the risks of non-compliance and reducing the likelihood of defects or procurement failures. This emphasizes the importance of maintaining high-quality benchmarks in procurement activities to ensure value for money and long-term sustainability of procured goods and services.

Also, the study concluded that delivery timelines are a critical component of procurement effectiveness. The majority of respondents agreed or strongly agreed that timely delivery of goods and services, supported by proper planning and forecasting, streamlines operations and minimizes delays. Lead time reduction strategies and effective inventory management were seen as essential in achieving timely procurement outcomes. While external factors such as transportation and regulatory changes may influence delivery, proactive management of the order cycle can significantly enhance procurement performance. Therefore, the study underscores that cost savings, quality assurance, and delivery timelines collectively contribute to more effective, efficient, and accountable procurement processes in Local Government Authorities, including MCC.

5.2 Recommendations

The study suggests that Local Government Authorities in Tanzania, especially MCC, should use Key Performance Indicators (KPIs) more often to make their procurement processes more effective. First, the Government of the United Republic of Tanzania (URT) should improve the legal and regulatory framework by updating procurement laws to reflect modern practices that promote transparency and accountability. They should also strengthen capacity-building programs to help procurement professionals learn more about how to use KPIs. Second, MCC should encourage the use of comprehensive procurement policies that find a balance between cost-effectiveness and quality, improve stakeholder collaboration to build trust and transparency, invest in research and new ideas in

procurement strategies, and set clear SMART performance benchmarks to help with procurement activities and fairly judge supplier performance. Third, procurement professionals should keep learning new things, make connections with other professionals, and use best practices from around the world to save money, ensure quality, and deliver on time. Lastly, future researchers should look into other KPIs, like managing supplier relationships, transparency mechanisms, contract management efficiency, and stakeholder satisfaction, as well as doing comparative studies across different LGAs in Tanzania. This will give them a better idea of how well procurement works.

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