

Internal Control Systems and the Revenue Collection Performance among Local Government Authorities (LGA) in Tanzania

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ABSTRACT

This study examines the influence of internal control systems on revenue collection performance in selected Local Government Authorities (LGAs) in Tanzania. Weak internal controls contribute to inefficiencies, fraud, and inconsistent financial reporting, posing challenges to revenue collection. The study evaluates the influence of internal control mechanisms in three LGAs, Mbeya, Mwanza, and Manyara, categorised as high, medium, and low performers by the Controller and Auditor General (CAG). A cross-sectional survey design was employed, collecting data from 400 revenue officers across the three LGAs. The study applied Two-Stage Least Squares (2SLS) regression, using external audit frequency as an instrument to address endogeneity concerns. Structured questionnaires facilitated standardised data collection. Findings reveal that solid internal controls significantly improve revenue collection. Accurate financial records ($\beta = 0.045, p < 0.01$), timely reporting ($\beta = 0.226, p < 0.01$), and effective monitoring ($\beta = 0.152, p < 0.01$) enhance revenue efficiency. However, fraud incidents negatively impact revenue growth ($\beta = -0.042, p < 0.1$). Internal audits strongly influence revenue increments ($\beta = 0.241, p < 0.01$), highlighting their crucial role. To enhance revenue performance, LGAs should strengthen internal audits, improve the accuracy of financial records, implement fraud prevention measures, and optimise reporting timelines. Policymakers should establish standardised internal control frameworks, invest in technology, and engage Public-Private Partnerships (PPPs), local communities, civil society organisations, and NGOs to enhance external oversight, promote citizen participation, and reinforce trust. Additionally, conducting regular policy reviews will improve accountability and efficiency in revenue collection processes.

Key terms: Internal Control System, Local Government Authorities, Revenue Collection Performance, Tanzania, Two-Stage Least Squares.

INTRODUCTION

Revenue collection is a crucial function for governments globally, as it enables the funding of public services and supports economic growth (Zaman & Juma, 2023; Kitole et al., 2024). Strong internal control systems are essential for improving transparency, accountability, and efficiency in financial management, which directly enhances revenue collection performance (Odhiambo & Nyangweso, 2023; Babu & Oluwole, 2022). Countries with effective internal controls demonstrate better outcomes in terms of revenue increment, effectiveness, reliability, and efficiency (IMF, 2018; Mutemi & Wanjala, 2024). However, in sub-Saharan Africa, weak internal control systems hinder revenue collection performance, with tax-to-GDP ratios averaging 15 per cent, significantly below the global average of 25 per cent (OECD, 2019). Corruption and inefficiencies exacerbate these challenges, prompting many countries to implement reforms aimed at strengthening internal controls (African Development Bank, 2020; Lwanga & Tumwebaze, 2022).

The African Union's Agenda 2063 underscores the importance of enhancing revenue collection to achieve sustainable development (African Union, 2019; Utouh & Kitole, 2024). Despite this emphasis, several African nations face persistent challenges, such as inadequate internal control frameworks and high levels of informality in their economies. In Ghana and Nigeria, for example, tax administration reforms have struggled with enforcement and compliance issues, undermining revenue growth (World Bank, 2021). East African countries like Kenya and Uganda have made progress by adopting technology and improving auditing practices, which have bolstered effectiveness and efficiency (Adomako et al., 2020; Kitole & Sesabo, 2024; Gupta & Rao, 2021). However, weaknesses in internal controls remain, particularly in local government authorities, where oversight is limited (Fjeldstad & Heggstad, 2018).

Studies substantiate the relevance of Institutional Theory in this perspective. For example, Fjeldstad and Heggstad (2018) demonstrated the importance of internal audits and reporting timeliness in fostering accountability and improving revenue performance in East African local governments. De Simone and Flores (2019) found that accurate financial records

significantly enhanced efficiency in local governments, while Alm and Embaye (2017) linked firm fraud prevention strategies to increased reliability and effectiveness in tax collection. These studies highlight the practical applicability of internal control systems in enhancing revenue collection performance.

In many sub-Saharan African countries, local governments face significant challenges in revenue collection due to weak internal control systems. This issue is particularly pronounced in Tanzania, where local government authorities have established internal control systems that include clear financial management policies, segregation of duties, regular audits, effective monitoring, and transparent reporting. These elements are intended to ensure accuracy, prevent fraud, and enhance accountability. However, local governments in Tanzania are severely constrained by insufficient internal controls, leading to underperformance in key areas such as effectiveness, reliability, and efficiency.

The Tanzania Revenue Authority reported that local governments achieved only (50%) of their revenue potential in 2022 due to rampant fraud and inefficient systems (URT, 2023; Dimoso & Andrew, 2021). This shortfall undermines the ability of local governments to deliver essential services and erodes public trust in government institutions (Ngowi, 2017; Chiwanda & Mbeke, 2023; Benson & Hensley, 2023). These issues reflect broader regional trends across sub-Saharan Africa, where many local governments are grappling with similar challenges. Addressing these challenges requires the implementation of vigorous internal control systems, including regular audits, accurate financial reporting, and effective monitoring, to improve revenue collection performance. This study seeks to contribute to this effort by empirically examining the effects of internal control systems on revenue collection performance in Tanzania's Local Government Authorities.

Despite this literature, gaps remain in understanding the specific impacts of internal control systems on revenue collection performance in Tanzanian Local Government Authorities. By addressing this gap, the current study contributes to the existing literature by providing empirical evidence on how internal control systems influence revenue increment, effectiveness,

reliability, and efficiency. The findings are expected to inform policy and practice, helping local governments enhance their revenue collection mechanisms and, ultimately, improve service delivery and governance.

LITERATURE REVIEW

Theoretical Framework

This study draws upon Institutional Theory, as developed by Meyer and Rowan (1977), which emphasises the role of organisational structures, rules, and norms in shaping behaviour within institutions. Institutional theory posits that organisations are deeply influenced by their external environments and tend to adopt structures that align with societal expectations and norms to gain legitimacy. A central assumption of this theory is that organisations strive to conform to established norms and practices, which in turn affects their performance and effectiveness. This theoretical framework is particularly relevant to the study of internal control systems in local government authorities, where such systems serve as institutional mechanisms designed to promote compliance, efficiency, and effectiveness in revenue collection.

Applying Institutional Theory to this study of internal control systems, the theory suggests that elements such as internal audits, financial record accuracy, fraud prevention, reporting timeliness, and monitoring create an environment conducive to compliance and improved performance. For example, effective internal audits can ensure adherence to financial regulations, thereby enhancing the effectiveness and reliability of revenue collection. Similarly, accurate financial records are critical for the efficiency and growth of revenue by providing a clear and accurate picture of financial activities, reducing errors, and supporting informed decision-making. Fraud prevention measures, such as consistent monitoring and timely reporting, play a crucial role in detecting and deterring fraudulent activities, thus bolstering the reliability and efficiency of revenue collection processes.

Empirical studies support the application of Institutional Theory to internal control systems in local government settings. For instance, De Simone and Flores (2019) found that accurate financial records significantly enhanced the effectiveness and efficiency

of revenue collection in local governments. Alm and Embaye (2017) demonstrated that strong monitoring and fraud prevention strategies were positively associated with increased reliability and effectiveness in tax collection. In the Tanzanian setting, Fjeldstad and Heggstad (2018) highlighted the importance of institutional mechanisms such as internal audits and reporting timeliness in improving revenue performance by fostering compliance and accountability. These studies underscore the relevance of institutional theory in understanding how internal controls, such as institutional structures, influence revenue collection performance in local government authorities.

Empirical Reviews

Several empirical studies have explored the impact of internal control systems on revenue collection performance across various regions. Fjeldstad et al. (2018) examined local government revenue collection in East Africa, including Tanzania and Uganda. They found that strong internal control systems significantly improved revenue collection by enhancing transparency and accountability. The study emphasised the importance of regular audits and effective monitoring to detect and prevent fraud, thereby increasing revenue mobilisation. Similarly, Mwenda (2019) focused on Kenya and highlighted the role of internal audit functions in enhancing revenue collection efficiency. The study revealed that solid internal audits contributed to improved revenue performance by identifying inefficiencies and ensuring compliance with financial regulations. It recommended investing in audit training and resources to strengthen the capacity of audit departments.

Moreover, in Ghana, Mensah and Ofori (2020) examined the effects of financial record accuracy on revenue collection in local governments. They found that accurate financial records significantly enhanced the effectiveness of revenue collection processes by reducing errors and improving decision-making. The study suggested implementing stricter financial management standards to maintain record accuracy. In addition to this, Kanyi et al. (2020) analysed the impact of fraud prevention measures on revenue collection in Kenyan municipalities. Their research demonstrated that effective anti-fraud strategies, such

as strong internal controls and regular audits, were associated with increased revenue collection. The authors recommended fostering a culture of transparency and accountability to deter fraudulent activities.

Additionally, Asare et al. (2021) conducted a study in Ghana exploring the influence of reporting timelines on revenue collection performance. Their findings indicated that timely financial reporting significantly improved revenue collection effectiveness and efficiency by enabling informed decision-making and reducing delays. The study recommended investing in digital reporting systems to streamline reporting processes. In a similar vein, Mutua and Wanjohi (2022) assessed the role of monitoring activities in revenue collection in Tanzania. They found that enhanced monitoring practices contributed to higher effectiveness scores by ensuring compliance and identifying discrepancies early. However, they also noted that overly restrictive monitoring could hinder revenue growth, suggesting the need for balanced oversight.

Furthermore, in Uganda, Nabukenya et al. (2023) examined the impact of internal audits on revenue reliability. Their results showed that effective internal auditing significantly enhanced the reliability of revenue collection by ensuring adherence to financial management standards and reducing errors. The study emphasised the importance of independent and well-resourced audit functions. Finally, Omondi et al. (2024) focused on Kenya and investigated the effects of financial record accuracy on revenue collection efficiency. They found that accurate financial records improved operational efficiency by streamlining processes and reducing costs. These studies collectively underscore the critical role of various

elements of internal control systems in improving revenue collection performance across different environments.

METHODOLOGY

This study adopted a cross-sectional research design to provide a snapshot of revenue collection performance across three Local Government Authorities (LGAs), Mbeya, Mwanza, and Manyara, at a single point in time. The design enabled the exploration of relationships between variables, facilitating meaningful comparisons of performance across the selected LGAs. The positivism research philosophy guided the study, emphasising objectivity and the use of quantitative data to derive unbiased conclusions. This approach was chosen to ensure the findings were grounded in measurable and observable phenomena, aligning with the goal of statistically analysing internal control systems and their influence on revenue collection performance.

This study focused on Mwanza City, Mbeya City, and Manyara Municipal Council due to notable disparities in revenue collection performance, categorised as best performers (88% to 101%), medium performers (77% to 87%), and least performers (64% to 76%) based on Controller and Auditor General (CAG) reports (NAOT, 2020). Despite the implementation of the Revenue Enhancement Plan (REP), these variations persist. Mbeya City Council maintains an average performance of (91%), ranking among the best-performing LGAs, while Mwanza City Council averages (79%), placing it in the medium category. Manyara Municipal Council records an average of (76%), ranking among the lowest performers, highlighting the need for further investigation and corrective measures. To address this gap, the study examines how internal control systems influence revenue collection performance in LGAs.

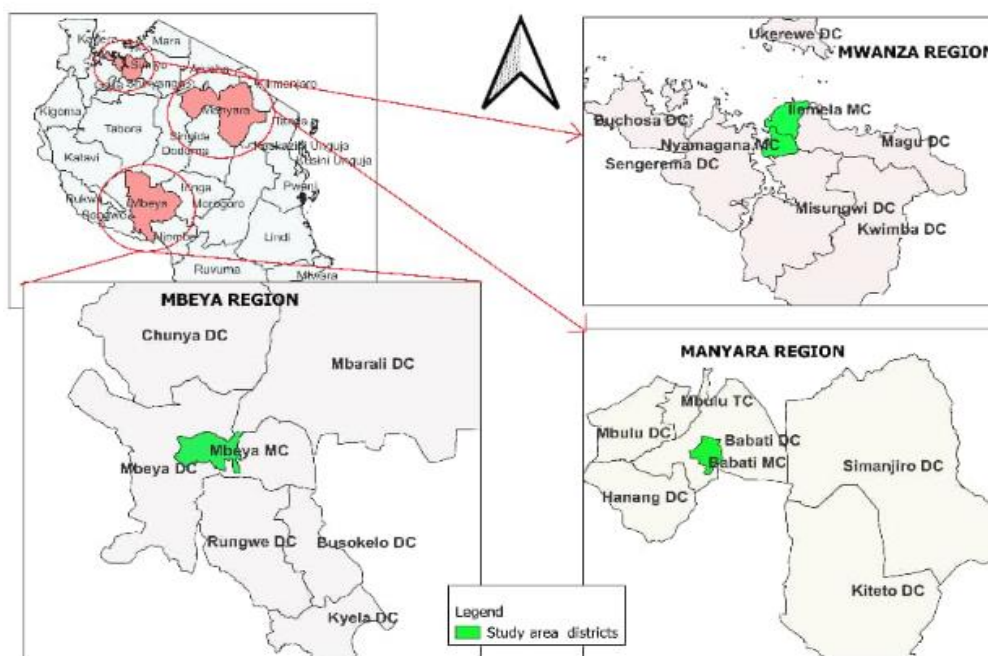


Figure 1: Geographical Location of the study area

This study utilised probability and purposive sampling methods for sample selection and data collection. A multistage sampling approach was implemented to identify study participants, specifically 1,023 officers responsible for revenue collection across three selected Local Government Authorities.

Hence, the sample size for this study was determined using the Yamane formula (1967) in the following manner: $n = \frac{N}{1 + N(e)^2}$

Where n is the sample size, and N is the estimated number of officers from two selected LGAs and e = Level of estimation $(0.05)^2$.

$$\begin{aligned} \text{Therefore } n &= \frac{N}{1 + N(e)^2} = \frac{1023}{1 + 1023(0.05)^2} \\ &= 400 \end{aligned}$$

To ensure that the proportionality of sampled LGAs officers to the total number of LGAs found in a particular LGAs, a proportionate random sampling was applied (Hansen et al., 1953). The formula is as follows: $a = \frac{n}{N} * b$ where: a is sample size for each LGA, n is a total number of sampled LGAs officers, N is the target LGAs population and b is target organic sample size from each LGA.

Table 1: Number of Sampled Respondents from each LGAs

Council	Total Officers (N)	Sampled LGAs Officers	% of the total sample
Mwanza CC	372	$372/1023 * 400 = 145$	36
Manyara UC	311	$311/1023 * 400 = 122$	30.5
Mbeya CC	340	$340/1023 * 400 = 133$	33
Total	1023	400	100

In Table 1, the target population consisted of 1,023 officers responsible for revenue collection in the selected LGAs. Using the Yamane formula (1976) with a (5%) margin of error, the sample size was calculated to be 400 officers, distributed proportionally across

the LGAs: 133 from Mbeya City Council and, 145 from Mwanza and 122 from Manyara Councils. Random sampling was employed to ensure that each officer had an equal chance of being selected, minimising bias and enhancing the generalizability of the findings.

Structured questionnaires were used to collect standardised data on various organisational factors influencing revenue collection performance. The questionnaires were administered directly to respondents, allowing for clarification of questions where needed and ensuring high-quality responses.

4.2 Analytical Modeling

To estimate the effect of the internal control system on revenue collection performance in Local Government Authorities (LGAs), this study uses the Instrumental Variable (IV) approach, specifically the Two-Stage Least Squares (2SLS) method. The 2SLS method is a powerful tool for addressing endogeneity issues, which occur when an explanatory variable is correlated with the error term, leading to biased and inconsistent estimates in Ordinary Least Squares (OLS) regression.

Consider the following structural model:

$$Y_i = \alpha_0 + \alpha_1 X_i + W_i' \alpha + \varepsilon_i$$

Whereas Y_i represents the revenue collection performance for LGA i , and X_i denotes the internal control system strength for LGA i . W_i is a vector of control variables, including demographic factors, revenue collection tools, and administrative characteristics. These variables account for factors influencing performance but are not the study's primary focus. ε_i is the error term, assumed to have a zero mean and constant variance, but it may be correlated with X_i , leading to endogeneity.

To address the potential endogeneity of X_i , this study introduces an instrumental variable, Z_i (in this case,

the frequency of external audits). The instrumental variable must satisfy two key conditions of relevance meaning that it must be collated with X_i , and exogeneity implying that it must be uncorrelated with the error term ε_i but Z_i affects the Y_i only through its influence on X_i .

Therefore, in the first stage of the 2SLS estimation involves regressing the endogenous variable X_i on the instrument Z_i and the control variables W_i :

$$X_i = \pi_0 + \pi_1 Z_i + W_i' \pi + \mu_i$$

Whereas π_0 is the intercept, π_1 is the coefficient on the instrument Z_i , $W_i' \pi$ represents the coefficients on the control variables, μ_i is the first-stage error term. Moreover, the predicted values \hat{X}_i from this regression, which are the fitted values of X_i , are used in the second stage.

In the second stage, the predicted values \hat{X}_i from the first stage are substituted for X_i in the original structural equation to estimate the effect on the dependent variable Y_i :

$$Y_i = \beta_0 + \beta_1 \hat{X}_i + W_i' \beta + v_i$$

Whereas \hat{X}_i is the predicted value of X_i from the first stage, v_i is the second-stage error term, which is assumed to be uncorrelated with \hat{X}_i . Moreover, the measurement and description of variables used in the study are presented in Table 1.

Table 1: Description of Variables and Measurements

Variables	Description	Measurement scale
Revenue collection performance	A composite measures the growth in revenue collection over a specified period.	Increment scores
	A composite index measuring the ability of the system to meet revenue targets and goals.	Effectiveness Scores
	A composite index that evaluates the consistency and dependability of the revenue collection process.	Reliability Scores
	A composite index that assesses the cost-effectiveness and resource utilisation in revenue collection.	Efficiency scores
Internal audit	Effectiveness of internal control systems in place within the LGAs.	1 if effective, 0 otherwise

Variables	Description	Measurement scale
Financial records accuracy	Accuracy and reliability of financial records maintained by the LGAs	1 if accurate, 0 otherwise
Fraud incidents	Severity of incidents related to fraud or misconduct in revenue collection processes.	1 if Severe, 0 otherwise
Monitoring	Follow up of dedicated personnel in revenue collection	1 if followed by 0 otherwise
Frequency of external audits	The number of times an external audit is performed	Number of external audits

Measuring Revenue Collection Performance

Revenue collection performance was assessed using four key scores: increment, effectiveness, reliability, and efficiency. These scores were derived from responses to Likert scale questions, where respondents rated aspects of revenue collection performance from strongly disagree to strongly agree. Composite scores for each dimension were calculated by averaging the responses across relevant items, assigning numerical values (e.g., 1 for strongly disagree to 5 for strongly agree). The summed values for each respondent provided an overall score for each dimension. This approach offered a quantitative measure of performance, reflecting the respondents' perceptions of each aspect. By computing these scores, the study quantified and compared performance across dimensions, providing a comprehensive evaluation of the factors influencing revenue outcomes in Local Government Authorities.

FINDINGS AND DISCUSSION

Respondents' Characteristics

The gender and educational distribution of respondents, as shown in Figure 2, reveals a predominance of male participants, who make up (72.75%) of the sample. This indicates that men were more likely to participate, potentially due to societal, cultural, or occupational factors. Female respondents represent (27.25%) of the sample. In terms of educational attainment, (33%) of respondents hold a postgraduate degree, suggesting a high level of expertise or specialisation. (31%) have completed secondary education, reflecting a solid foundation of literacy and numeracy skills. Additionally, (22.25%) possess a diploma, indicating technical or practical skills. Those with primary education make up (10.25%) of the sample, while only (3.5%) hold a first degree, showing a smaller segment of individuals with undergraduate-level education.

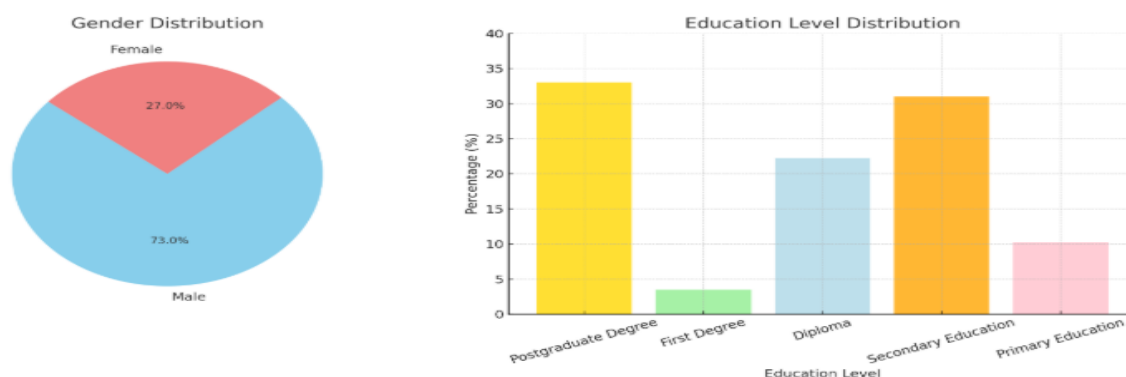


Figure 2: Gender and Education Level of The Respondents

The gender and educational composition provides valuable intuition into challenges and opportunities for improving internal control systems (ICS) and revenue

collection performance. The male-dominated workforce (73% male and (27%) female suggests a potential gender imbalance in roles overseeing

internal control functions, possibly influenced by structural or cultural factors. This imbalance may impact organisational culture and decision-making processes, indicating a need for inclusive strategies to enhance ICS effectiveness. Additionally, the diverse educational background of employees presents a critical challenge. Only (33%) hold postgraduate qualifications, while significant portions have lower educational levels (secondary education at (31%), diploma at (22.25%), and primary education at (10.25%). This educational profile may limit technical capacity, affecting the effective implementation of complex financial and ICS tools. The demographic and educational data underscore the need for tailored interventions, such as targeted capacity-building programs, to address skill gaps and enable LGAs to adopt more efficient and inclusive internal control systems for improved revenue collection.

Characteristics of Internal Control Systems and Revenue Collection Performance

Table 6 presents the characteristics of internal control systems and revenue collection performance in Local

Government Authorities (LGAs) in Tanzania, highlighting key differences across the sampled regions. The Increment Score averages 0.530 (53%) with a standard deviation of 0.500, indicating moderate variability in revenue collection improvements. Scores range from 0.24 (24%) to 1 (100%), reflecting uneven performance among LGAs. Mwanza demonstrates significant revenue collection gains, while Mbeya and Babati lag behind, suggesting the need for targeted interventions to boost revenue increment in these regions.

The Effectiveness Score, with a mean of 0.477 (47.7%), reveals moderate effectiveness in revenue collection across LGAs, with notable variability. Mwanza appears to outperform other regions in achieving effectiveness, while Mbeya and Babati struggle to implement systems that ensure high performance. This disparity underscores the importance of identifying and addressing region-specific challenges to improve effectiveness in revenue collection practices.

Table 6: Variables for Revenue Collection Performance in Selected LGAs in Tanzania

Variables	Mean	Std. Dev.	Min	Max
Effectiveness Score	0.477	0.500	0.2	1
Increment Score	0.530	0.500	0.24	1
Reliability Score	0.502	0.501	0.2	1
Efficiency Score	0.522	0.500	0.2	1
Reporting Timelines	0.875	0.331	0	1
Financial records	0.800	0.401	0	1
Internal Audit	0.100	0.300	0	1
Monitoring	0.858	0.350	0	1
Incentives	0.075	0.264	0	1

The differences in Reliability and Efficiency Scores are particularly notable. Mwanza consistently scores higher across both dimensions, establishing more reliable and efficient systems for revenue collection. This could be attributed to better internal control practices, such as regular audits and streamlined processes. In contrast, Babati and Mbeya face persistent challenges in both reliability and efficiency, suggesting systemic issues such as weaker oversight, inadequate monitoring, and less effective financial management. These differences highlight the need for

tailored interventions, where authorities in Babati and Mbeya could adopt best practices from Mwanza to strengthen their internal control systems and bridge the performance gaps. Addressing these disparities is critical to achieving equitable and sustainable improvements in revenue collection across all LGAs.

Regarding internal control factors, Reporting Timeliness stands out with a high mean score of 0.875 (87.5%) and a low standard deviation, indicating generally timely and effective reporting across most

authorities. Financial Records show a mean of 0.800 (80%), suggesting good accuracy but with some variability. Internal Audit activity, however, is notably low, with a mean of 0.100, potentially limiting the identification and correction of revenue system weaknesses. Monitoring shows strong oversight with a mean of 0.858 (85.8%), though the variability

suggests differing levels of effectiveness. Finally, Incentives have a very low mean of 0.075 (7.5%), indicating limited use or effectiveness of incentive structures, which could be an area for potential improvement to enhance revenue collection performance.

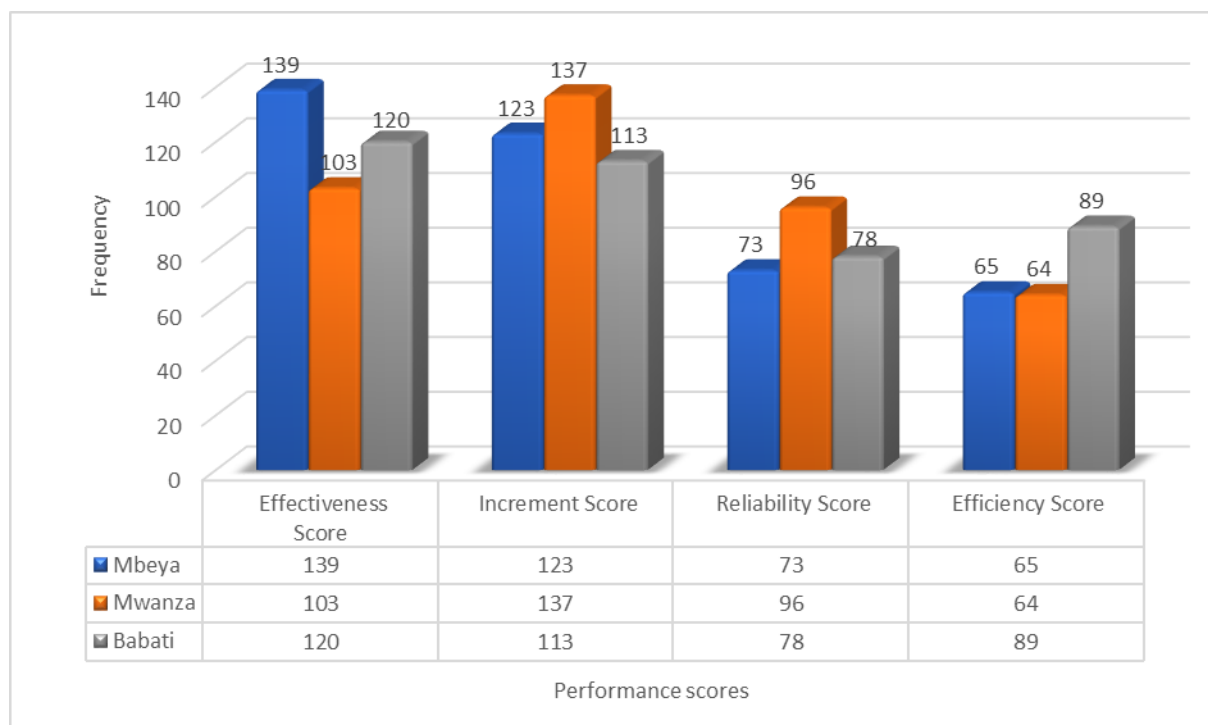


Figure 3: Distribution of Performance Scores across Local Governments Authorities

Figure 3 illustrates the distribution of performance scores across three local government authorities—Mbeya, Mwanza, and Babati—across four key metrics: effectiveness, increment, reliability, and efficiency. Mbeya consistently leads in effectiveness (139) and increment (123) scores, highlighting its strong overall performance in revenue collection and growth. Mwanza, while scoring lowest in effectiveness (103), achieves the highest increment score (137) and reliability score (96), demonstrating its focus on revenue growth and reliability. Babati shows balanced performance with a moderate effectiveness score (120) and relatively high-efficiency score (89), surpassing Mbeya (65) and Mwanza (64) in this area. These results suggest varying strengths among the local governments, with Mbeya excelling in effectiveness, Mwanza in reliability, and Babati in efficiency.

The Effect of the Internal Control System on Revenue Collection Performance

Table 7 provides an in-depth analysis of the impact of various internal control systems, financial records, fraud incidents, internal audits, reporting timelines, and monitoring on the performance of revenue collection. Four key performance measures effectiveness, increment, reliability, and efficiency are evaluated, with coefficients, t-values, and statistical significance levels reflecting the strength and direction of these relationships.

For the effectiveness score, the results indicate that maintaining accurate financial records has a significant positive impact, with a coefficient of 0.045 and a t-value of 3.90 ($p < 0.01$). Conversely, fraud incidents negatively influence effectiveness, as shown by a coefficient of -0.043 and a t-value of -2.18 ($p < 0.1$).

Reporting timelines also play a crucial role, with a strong positive relationship (0.226, $p < 0.01$, t-value: 4.32). Monitoring similarly contributes positively to effectiveness, with a coefficient of 0.152 ($p < 0.01$, t-value: 3.43). However, internal audits exhibit no significant impact on this measure, as indicated by 0.031 and t-value of 0.07.

In terms of the increment score, internal audits demonstrate a particularly strong and significant positive relationship. The coefficient of 0.241 and a t-

value of 13.07 ($p < 0.01$) highlight their critical role in enhancing revenue increments. However, fraud incidents adversely affect increment scores, with a coefficient of -0.042 and a t-value of -2.43 ($p < 0.1$). Reporting timelines also show a significant negative association, as indicated by a coefficient of -0.370 and a t-value of -8.71 ($p < 0.01$). Monitoring displays a negative effect as well, with a coefficient of -0.227 ($p < 0.01$) and a t-value of -5.38. Meanwhile, financial records show no significant influence on this performance measure.

Table 7: The Effects of Internal Control Systems on Revenue Collection Performance

Variables	Effectiveness score		Increment score		Reliability score		Efficiency score	
	Coeff.	t value	Coeff.	t value	Coeff.	t value	Coeff.	t value
Financial Record	0.045*** (0.047)	3.90	0.006 (0.553)	0.59	0.006 (0.559)	0.58	-0.006 (0.748)	-0.32
Fraud incidents	-0.043* (0.029)	-2.18	-0.042* (0.015)	-2.43	-0.052*** (0.023)	-3.01	-0.132*** (0.054)	-3.79
Internal audit	0.031 (0.943)	0.07	0.241*** (0.073)	13.07	0.519*** (0.015)	26.53	0.095** (0.017)	2.68
Reporting timelines	0.226*** (0.054)	4.32	-0.370*** (0.026)	-8.71	-0.063 (0.149)	-1.44	-0.293*** (0.014)	-3.86
Monitoring	0.152*** (0.031)	3.43	-0.227*** (0.054)	-5.38	-0.131*** (0.034)	-3.40	0.07 (0.323)	0.99
Constant	-0.926*** (0.044)	-2.85	1.187*** (0.016)	4.04	-3.17*** (0.002)	-3.17	1.575*** (0.044)	2.85
	Chi2= 643.68 Prob>chi2=0000		Chi2= 332.97 Prob>chi2=0000		Chi2= 466.90 Prob>chi2=0000		Chi2=378.57 Prob>chi2=0000	
*** $p < 0.01$ (1%), ** $p < 0.05$ (5%), * $p < 0.1$ (10%) Standard errors on brackets								

The reliability score is most positively impacted by internal audits, which have a substantial coefficient of 0.519 and a t-value of 26.53 ($p < 0.01$), underscoring the strong relationship between audit practices and reliability in revenue collection. Fraud incidents, however, undermine reliability, as reflected in the negative coefficient of -0.052 and t-value of -3.01 ($p < 0.01$). Monitoring also has a significant negative effect, with a coefficient of -0.131 ($p < 0.01$, t-value: -3.40). Reporting timelines exhibit no significant influence on reliability, as suggested by a coefficient of -0.063 and a t-value of -1.44. Similarly, financial records

display no notable relationship with reliability, with a coefficient of 0.006 and t-value of 0.58.

For the efficiency score, internal audits again prove to be a positive factor, with a coefficient of 0.095 and a t-value of 2.68 ($p < 0.05$). Fraud incidents exhibit a strong negative influence, as evidenced by a coefficient of -0.132 and a t-value of -3.79 ($p < 0.01$). Reporting timelines also show a significant adverse effect, with a coefficient of -0.293 and a t-value of -3.86 ($p < 0.01$). Monitoring, however, does not show a significant impact on efficiency, with a coefficient of 0.07 and a t-value of 0.99. Similarly, financial records have no

discernible effect, as reflected in a non-significant coefficient of -0.006 and a t-value of -0.32.

Generally, these results highlight the critical roles played by internal audits, fraud mitigation, and timely reporting in the performance of revenue collection systems. Internal audits emerge as the most consistently positive factor across the performance measures, significantly enhancing increment, reliability, and efficiency scores. On the other hand, fraud incidents consistently exert a detrimental influence on all performance dimensions. Reporting delays and ineffective monitoring also appear to negatively impact revenue collection performance in several areas, underlining the need for efficient and transparent processes.

Discussion based on the results demonstrates a significant relationship between financial record accuracy and effectiveness scores, highlighting the importance of precise and reliable financial data in optimising revenue collection processes. Interviews with key informants supported these findings, emphasising that accurate financial records streamline operations, minimise errors, and improve transparency, leading to enhanced revenue collection effectiveness. These results align with prior studies by Pina and Torres (2016) and De Simone and Flores (2019), which underscore the critical role of accurate financial records in promoting efficient public financial management. However, the lack of a significant impact on increment, reliability, and efficiency scores suggests that while financial record accuracy is foundational to effectiveness, other factors such as technology, staff training, and regulatory frameworks are equally critical for achieving improvements in these specific areas (Andrews et al., 2018; Mohammed & Muhammed, 2021).

Fraud emerged as a critical barrier to revenue collection performance, negatively impacting increment, reliability, and efficiency scores. Fraudulent activities siphon resources, erode public trust, and disrupt revenue collection processes, as previously demonstrated by Slemrod (2019) and Alm and Embaye (2017). The study revealed that fraud impairs revenue growth, reduces reliability, and hinders efficiency, findings that are consistent with the work of Fjeldstad et al. (2018) and Moore (2020), who reported similar

trends in other settings. For instance, Mughal and Akram (2020) found that fraud leads to unpredictable revenue flows, making resource planning difficult and undermining system reliability. Furthermore, the disruption of operational efficiency due to fraud increases administrative costs and weakens public financial systems (Besley & Persson, 2014). These findings reinforce the urgent need for solid anti-fraud mechanisms, including enhanced monitoring, fraud detection systems, and stricter accountability measures, to minimise revenue leakages and ensure system integrity.

Timely financial reporting was shown to be vital for effective revenue management, as it enables authorities to make informed decisions quickly, enhances accountability, and fosters transparency (Gupta & Melecky, 2020; Bird, 2019). However, delays in reporting negatively affected increment and efficiency scores, reflecting the detrimental impact of inefficiencies in reporting systems. These findings are consistent with Langer and Süsmuth (2021), who argue that delays in financial reporting hinder the identification and resolution of discrepancies, ultimately stalling revenue growth. Moreover, the significant negative relationship between reporting timelines and efficiency aligns with research by Fjeldstad & Heggstad (2018) and Moore (2020), emphasising that delayed reporting disrupts workflows, increases administrative costs, and hampers operational efficiency. Addressing these challenges through investments in digital reporting systems and process optimisation is critical for enhancing revenue management efficiency and sustainability.

Monitoring activities were found to have both positive and negative effects on revenue collection performance. Enhanced monitoring was positively associated with effectiveness scores, suggesting it improves compliance and reduces errors, as noted by Ngowi (2017). However, the study revealed a significant negative relationship between monitoring and increment scores, indicating that overly restrictive or inefficient monitoring systems can hinder revenue growth. Excessive control measures may create bureaucratic bottlenecks, such as delayed approval processes and redundant compliance checks, which slow decision-making and disrupt timely revenue

collection. Kessy and Urassa (2019) observed similar issues, such as excessive monitoring stifling revenue collection efforts. Additionally, the negative impact of monitoring on reliability scores, as supported by Fjeldstad and Heggstad (2018), highlights the need for efficient monitoring frameworks that promote compliance without introducing inconsistencies or unnecessary barriers.

Internal audits, while not significantly affecting the effectiveness of revenue collection, were found to have a strong positive influence on increment scores and significantly enhance both reliability and efficiency. These findings highlight the critical role of internal audits in improving revenue growth and operational performance. Studies by Ngowi (2017) and Nambajimana and Tusiime (2020) similarly demonstrate that strong internal auditing practices contribute to revenue mobilisation by identifying leakages and ensuring compliance with financial regulations. The positive relationship between internal audits and reliability scores suggests that auditing enhances the consistency and dependability of revenue collection processes. This finding aligns with Asiedu and Folmer (2017), who reported that rigorous internal audit frameworks in Ghana improved reliability by reducing errors and ensuring adherence to financial standards. Moreover, effective internal audits have been linked to improved operational efficiency, as evidenced by Mwaura (2016), further reinforcing the role of audits in optimising revenue collection performance.

The findings of this study not only align with previous research but also contribute new knowledge into the specific roles of internal control elements in revenue collection. While financial record accuracy and timely reporting are foundational to effective revenue management, addressing issues such as fraud, overly restrictive monitoring practices, and weak audit frameworks is critical for achieving holistic improvements in increment, reliability, and efficiency.

By addressing these gaps, local government authorities in Tanzania can significantly enhance their revenue collection systems, improve public trust, and strengthen their capacity to fund essential services.

This study provides a comprehensive framework for policymakers to design targeted interventions that build on the strengths of internal controls while addressing existing weaknesses. However, the study has a limitation in that it relies on self-reported data through questionnaires, which introduces the possibility of response bias. Future research could explore other internal control mechanisms, such as risk management strategies, automation of revenue collection processes, and the role of staff training in strengthening financial oversight. Expanding the study scope to include diverse LGAs or comparative studies across different governance structures would provide a broader understanding of how internal controls shape revenue performance.

Instrumental Variable Model Assumption Tests

The results presented in Table 4 assess the presence of endogeneity in the model using the Durbin and Wu-Hausman tests. Both tests are designed to determine whether the potentially endogenous variable, in this case, the internal control system, is correlated with the error term, which could bias the results of a standard Ordinary Least Squares (OLS) regression. The Durbin score test yields a chi-squared value of 12.1103 with a p-value of 0.0000. The highly significant p-value ($p < 0.01$) strongly indicates that the null hypothesis of exogeneity (i.e., no endogeneity) is rejected. This suggests that the internal control system is indeed endogenous, meaning that it is correlated with the error term in the revenue collection performance model. Similarly, the Wu-Hausman test produces a score of 6.073 with a p-value of 0.0006. Again, the highly significant p-value ($p < 0.01$) leads to the rejection of the null hypothesis of exogeneity. This result further confirms the presence of endogeneity in the model.

Table 4: Test for Endogeneity

Tests	Test Scores	P - Value
Durbin (score) $\chi^2(1)$	12.1103***	0.0000
Wu-Hausman	6.073***	0.0006

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Thus, both tests in Table 4 provide strong evidence of endogeneity in the relationship between the internal control system and revenue collection performance. This confirms the necessity of using an instrumental variable approach, such as the Two-Stage Least

Squares (2SLS) method, to obtain unbiased and consistent estimates. The presence of endogeneity underscores the importance of addressing this issue in the analysis to ensure the validity of the study's findings.

Table 5: First-stage Regression Summary Statistics

Variable	R-square	Adjusted R-square	Partial R-square	Prob > F
Frequency of external audits	0.6693	0.6520	0.6288	0.0000

The first-stage regression results in Table 5 indicate that the frequency of external audits is a strong and significant instrument for predicting the internal control system strength. With an R-square of 0.6693 and an adjusted R-square of 0.6520, the model explains a substantial portion of the variation in the internal control system. The partial R-square of 0.6288

further highlights the unique contribution of the instrument, and the highly significant F-test ($p=0.0000$) confirms its statistical relevance. These results suggest that the frequency of external audits is an appropriate instrument for use in the Two-Stage Least Squares (2SLS) estimation, ensuring reliable and consistent estimates in the analysis.

Table 6: Instrument Strength by Eigenvalue Statistic

	Critical Values			
	5%	10%	20%	30%
2SLS relative bias	55.18	48.11	37.08	27.24
	10%	15%	20%	25%
2SLS Size of nominal 0.05 Wald test	46.18	43.18	38.04	22.63
LIML Size of nominal 5% Wald test	39.04	33.32	26.16	16.22

eigenvalue statistic = 86.06

The results in Table 6 assess the strength of the instrument (frequency of external audits) using the eigenvalue statistic, which is compared against critical values to evaluate the potential bias and size distortion in the Two-Stage Least Squares (2SLS) estimation. The eigenvalue statistic of 86.06 indicates that the frequency of external audits is a very strong instrument for the Two-Stage Least Squares (2SLS) and Limited Information Maximum Likelihood (LIML) estimations. This value surpasses all critical thresholds for relative bias and size distortion, ensuring that the 2SLS estimates are both unbiased and correctly sized. Consequently, the strength of the instrument enhances the reliability and validity of the model's results, minimising potential biases and ensuring accurate statistical inference.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion: The study highlights the crucial role of internal control systems in influencing revenue

collection performance within local government authorities. While certain aspects, such as effective financial management and auditing, show promise in improving effectiveness and reliability, challenges such as fraud and reporting delays continue to undermine efforts. The findings underscore the need for continuous enhancement of internal controls to foster more efficient and firm revenue collection processes. **Recommendations:** To enhance revenue collection performance, local government authorities should prioritise improving financial record accuracy, which significantly boosts effectiveness but has limited impact on increment, reliability, or efficiency. Stricter financial management standards and training are recommended to ensure accurate record-keeping. Additionally, addressing fraud is critical, as it negatively impacts all aspects of revenue collection. Strengthening anti-fraud measures and fostering a culture of transparency can mitigate these adverse effects. Additionally, engaging stakeholders such as

local communities, civil society organisations, and NGOs in monitoring and accountability efforts can enhance external oversight, promote citizen participation, and reinforce trust in revenue collection processes. Timely reporting is essential for effectiveness, but delays can harm revenue growth and efficiency. Streamlining reporting processes, investing in digital systems, and training staff on efficient practices are crucial steps to minimise delays. Enhanced monitoring also plays a vital role in improving effectiveness but needs to be balanced with operational flexibility to avoid negative impacts on increment and reliability. Finally, internal auditing is vital for improving increment, reliability, and efficiency in revenue collection. Strengthening internal audit functions, ensuring adequate resources, and integrating audit findings into decision-making processes are recommended to enhance the positive impact of audits on revenue collection performance. Several targeted recommendations are proposed to improve internal control systems (ICS) and revenue collection in Local Government Authorities (LGAs). Tailored capacity-building programs should bridge skill gaps, focusing on technical training for employees with secondary or primary education. Policy reforms are necessary to address gender imbalances and educational disparities, aligning workforce composition with institutional goals. Additionally, ICS tools should be designed to accommodate diverse

educational levels, ensuring accessibility and equitable participation. Performance metrics derived from study data can serve as baseline indicators to monitor workforce improvements and their impact on ICS and revenue collection over time. LGAs must prioritise strengthening internal audit functions, as audits have demonstrated a strong positive impact on revenue increment, reliability, and efficiency. Regular audit cycles and enhanced training for auditors are essential for identifying and mitigating financial irregularities. Fraud prevention frameworks, including whistleblowing mechanisms and fraud detection systems, should be developed and enforced, complemented by ongoing ethical financial management training. Further, automated reporting systems are crucial for reducing delays and enhancing data accuracy, while capacity-building initiatives should extend through partnerships with educational institutions to offer certification programs in financial management. To promote gender equity, affirmative action strategies should encourage women's recruitment in roles overseeing revenue collection and ICS. Manyara and Mwanza can adopt successful strategies from Mbeya and establish knowledge-sharing platforms. Strengthening monitoring mechanisms, incentivising performance, addressing regional disparities, and enforcing supportive policies are critical steps toward sustainable improvements in revenue collection and financial management.

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