

Investigating The Role Of Internal Control Mechanisms On Revenue Collection In Tanzanian Local Government Authorities (LGAS)

^[1] Faiza Hamidu Msheri, ^[2] Yoke Chin Kuah, ^[3] Leong Lai Ying

^[1] Universiti Tunku Abdul Rahman, Teh Hong Piow, Faculty Business and Finance,

^[2] Universiti Tunku Abdul Rahman, Teh Hong Piow, Faculty Business and Finance,

^[3] Universiti Tunku Abdul Rahman, Teh Hong Piow, Faculty Business and Finance,

EMAIL: ^[1] msherifaiza@gmail.com, ^[2] kuahyc@utar.edu.my, ^[3] leong@utar.edu.my

Abstract– This study investigates how internal control mechanisms influence revenue collection in Tanzanian LGAs, focusing on Monitoring of Control (MOC), Financial Management Information System (FMIS), and Information-Communication (INFC), and guided by COSO Framework, agency theory, and Resource-Based View (RBV). A total of 358 responses from finance and accounting officers in the selected LGAs were analyzed using PLS-SEM approach. Findings reveal that FMIS and INFC have strong, positive, and statistically significant direct effects on revenue collection, emphasizing their role as critical enablers of financial performance. MOC, however, showed no direct influence on revenue collection but significantly enhanced both FMIS and INFC, which in turn mediated its impact. This suggests that MOC's effectiveness is realized through its ability to strengthen operational systems rather than through direct revenue outcomes. Interestingly, the moderating role of INFC between MOC and revenue collection was found to be insignificant, implying weak interaction effects in this relationship. From a practical perspective, the results imply that LGAs need to invest in more capacity-building, digital systems, and continuous monitoring to improve revenue collection. Hence, this study recommends that LGAs need to strengthen the implementation strategies, integrate their systems further, and direct internal controls to policy implementation to foster sustainable revenue management.

Index Terms– Local Government Authorities (LGAs), Revenue Collection, Internal Control Mechanisms, Financial System, Tanzania.

I. INTRODUCTION

Local Government Authorities (LGAs) in Tanzania play a critical role in delivering essential services, promoting socio-economic development, and ensuring equitable resource distribution. The effectiveness of these functions depends heavily on mobilizing and managing own-source revenue [1]. Over the past two decades, the Government has implemented major reforms such as the Local Government Reform Programme (LGRP) and the Public Financial Management Reform Programme (PFMRP) to strengthen fiscal decentralization, improve internal controls, and modernize revenue collection systems [2].

Historically, revenue collection was a decentralized function, with LGAs responsible for property tax collection. However, this system was plagued by inefficiencies, and studies revealed that LGAs were collecting less than 0.3% of national GDP, far below their theoretical revenue potential [3]. Administrative weaknesses, limited enforcement, and a lack of modern tools hindered revenue collection. In 2008, the government centralized property tax collection under the Tanzania Revenue Authority (TRA) to address these challenges. However, this centralization did not significantly improve performance, leading the government to re-decentralize property tax collection in 2014. Along with this, technology-based solutions, such as the Local Government Revenue Collection Information System (LGRGIS) integrated with Geographic Information Systems (GIS), were introduced to enhance transparency and efficiency, including mass property valuation and electronic billing [4][5].

Technology-based reforms like the rollout of FMIS (e.g., Epicor, LGRGIS, and the Facility Financial Accounting and Reporting System [FFARS]) have been deployed to enhance the efficiency and transparency of financial transactions [6]. The integration of GIS into LGRGIS and the use of Point-of-Sale (POS) devices have further expanded the revenue base in some LGAs. For example, in Dar es Salaam, the implementation of LGRGIS led to an increase in the number of registered properties from 160,000 to over 270,000 in just one year in Kinondoni Municipality [7].

Despite these efforts, performance gaps persist. In the FY 2022/23, 103 LGAs achieved only 80% of their approved revenue targets, resulting in a shortfall of TZS 115.88 billion [8]. This shortfall not only delays development projects and constrains service delivery but also increases dependence on central government transfers, which in some councils exceed 84% of their total budgets [9]. Reports from the

Controller and Auditor General (CAG) indicate that FMIS integration remains incomplete, particularly in inventory, receivables, and asset management modules, leading to manual data transfers that increase the risk of errors and manipulation [10]. Weaknesses in internal controls—particularly in the monitoring of controls (MOC), FMIS utilization, and Information & Communication (INFC)—remain key obstacles to improving revenue performance. Ineffective monitoring delays fraud detection, weakens enforcement, and allows for revenue leakages, while underutilization of FMIS, coupled with vulnerabilities in POS and e-payment systems, compromises data accuracy and timeliness. Furthermore, inadequate INFC hinders timely reporting, record management, and inter-departmental coordination, undermining stakeholder engagement and the ability to proactively address revenue gaps [11], [12].

The PFMRP VI Strategic Plan (2022–2027) prioritizes strengthening internal controls, integrating FMIS, and enhancing monitoring systems to improve fiscal sustainability [13]. However, empirical evidence on how these elements interact to influence revenue collection is still limited. This study aims to fill this gap by examining the direct and indirect effects of MOC, FMIS, and INFC on revenue collection in Tanzanian LGAs, while also exploring how the continued evolution of digital systems and internal controls can support sustainable revenue generation and reduce reliance on central government funding.

A. Revenue Collection Challenges in Local Government Authorities (LGAs) in Tanzania

Local Government Authorities (LGAs) in Tanzania face numerous challenges that hinder their ability to effectively collect revenue and provide essential services to local communities. Revenues are essential for local governments to fund development projects, infrastructure maintenance, and social services such as health, education, and sanitation [14], [15]. However, systemic and operational difficulties severely limit their revenue-generating potential. Key challenges include:

One of the major barriers to effective revenue collection is the inadequacy of internal controls. This results in poor supervision, improper financial reporting, and an environment vulnerable to fraud [14]. Weak control environments hinder transaction monitoring, leading to low accountability and negatively impacting revenue performance. The use of Point of Sale (POS) systems, while intended to enhance transparency, has been undermined by issues such as the generation of fake receipts. This issue compromises the overall purpose of these systems, which are meant to reduce human error and improve transparency [16]. The persistence of these vulnerabilities, combined with the low capacity and low success rates of e-payment systems, further limits the potential for improving revenue collection [17].

Another critical challenge is the suboptimal contract management of outsourced revenue collection services. Weak enforcement and monitoring of contracts with private companies have led to delays in remittances or substandard performance, as evidenced in [18]. This reduces the overall effectiveness of revenue collection efforts. Staffing shortages and limited resources have significant implications for operational effectiveness in LGAs. Without sufficient personnel and resources, LGAs struggle to implement effective revenue collection strategies and processes, further exacerbating their revenue challenges.

Weaknesses in the internal control systems, particularly in monitoring, are closely linked to challenges in revenue collection. Poor monitoring leads to a lack of control, delayed fraud detection, and ineffective implementation of procedures, resulting in continuous revenue loss [14]. Additionally, the underutilization of Financial Management Information Systems (FMIS), including weak POS and e-payment systems, hampers data accuracy and timely reporting, ultimately undermining transparency and operational effectiveness in revenue management [17], [16]. Information and communication systems further hinder the timely reporting, record management, and coordination between departments within LGAs. This lack of effective communication delays the implementation of corrective measures and impedes stakeholder engagement and support for monitoring and evaluation [19]. These challenges highlight the urgent need for better integration of monitoring, FMIS, and communication systems to improve revenue performance and operational efficiency within LGAs. To address these issues, it is critical to assess the impact of key internal control variables on revenue collection in Tanzanian LGAs.

By analyzing how monitoring systems, FMIS, and communication mechanisms influence revenue management, this study aims to identify specific weaknesses or areas for reform. The findings will provide policymakers with empirical tools to improve public administration, enhance oversight, and calibrate the quality of management controls in decentralized government operations. Ultimately, this study seeks to assess both the direct and indirect effects of internal control mechanisms, including monitoring of controls, FMIS, and INFC, on revenue collection in Tanzanian LGAs.

Specific Objectives

- To examine the influence of internal control mechanisms (monitoring of controls, financial management information systems, and information and communication) on revenue collection in Tanzanian LGAs.
- To determine the effect of monitoring of controls on financial management information systems and information/communication.
- To examine the extent of impact of information/communication on the relationship between monitoring of controls and revenue collection in Tanzanian LGAs.
- To investigate the role of financial management information systems and information/communication on the relationship between monitoring of controls and revenue collection in Tanzanian LGAs.

B. Motivation of the Study

This study is motivated by persistent challenges in revenue collection among Tanzanian Local Government Authorities (LGAs), including revenue leakages, weak monitoring systems, and limited use of digital financial platforms. These challenges undermine financial autonomy and constrain the ability of LGAs to deliver essential services and development projects. Addressing this gap requires a closer examination of how internal controls, financial management information systems (FMIS), and communication processes interact to influence revenue collection. By situating the study within Agency Theory, the COSO framework, and the Resource-Based View (RBV), the research seeks to provide a robust foundation for understanding and improving public financial management under decentralized conditions.

II. LITERATURE REVIEW

A. Theoretical Foundation and Framework Development

This study draws on three key theoretical perspectives: Agency Theory, the COSO Framework, and the Resource-Based View (RBV), to develop a well-rounded framework for examining how internal control mechanisms influence revenue collection in Tanzania's Local Government Authorities (LGAs). Agency Theory provides the foundation by explaining the relationship between public officials (agents) and those they serve (principals), whether citizens or higher levels of government [20], [21]. The theory suggests that without proper oversight, agents may act in their own interest rather than in the public's best interest. In the context of LGAs, this highlights the importance of internal controls like monitoring systems, communication processes, and financial technologies to strengthen accountability and reduce such risks. Building on this, the COSO Framework breaks internal control into five core components: the control environment, risk assessment, control activities, information and communication (INFC), and monitoring of controls (MOC) [22]. This study focuses particularly on MOC, FMIS, and INFC. COSO offers a practical structure for understanding how internal procedures can be improved to enhance revenue management and service delivery in local governments [23].

The Resource-Based View (RBV) adds a strategic dimension to the analysis by framing FMIS and communication systems as valuable, rare, and hard-to-imitate organizational resources [24], [25]. From this angle, these internal control tools are not just compliance mechanisms but strategic assets that can improve performance when effectively deployed [26]. Together, Agency Theory, the COSO Framework, and RBV provide a well-rounded conceptual base. By combining insights on behavior (Agency Theory), systems and procedures (COSO), and strategic capabilities (RBV), the framework captures the various dimensions that influence revenue collection, both directly and indirectly.

B. Importance of Integrating Theories

The integration of these three theories goes beyond just building a conceptual model; it serves both practical and methodological purposes. Agency Theory, COSO, and RBV each highlight a different angle of internal control: accountability, institutional processes, and strategic resource management. Agency Theory sheds light on the accountability challenges between elected officials, civil servants, and citizens [25]. It emphasizes why internal controls like monitoring and communication are necessary to reduce risks of mismanagement or non-compliance [27]. The COSO Framework, meanwhile, translates theory into actionable structures, offering clear guidance for how LGAs can implement and assess their internal control systems to ensure sound financial practices [23].

However, these controls must also be supported by strong capabilities, and that is where the RBV adds critical value. It reframes internal controls, especially FMIS and INFC, not just as administrative tools, but as strategic resources that can help LGAs achieve superior financial performance if they are properly

developed, protected, and leveraged. Therefore, the integration of these theories enhances the study's relevance by capturing real-world dynamics in LGAs, while also filling theoretical gaps where previous studies focused on only one dimension of internal control. This fusion allows the study to explore both direct and indirect effects more comprehensively.

C. Previous Literature on Internal Control Mechanisms

Applying the three theories is further supported by evidence from existing studies, which highlight how each internal control mechanism contributes to revenue collection in Local Government Authorities (LGAs). This section draws on prior research to explain the importance of monitoring of controls (MOC), Financial Management Information Systems (FMIS), and information and communication (INFC), particularly in the Tanzanian context.

Monitoring of controls is a core component of the COSO Framework and plays a vital role in assessing the consistency and effectiveness of internal controls [23]. In decentralized public finance systems like LGAs, strong monitoring practices help detect risks and irregularities early, improving accountability in revenue management. For example, [28] found that regular, structured monitoring is closely linked to improved organizational performance. Still, practical challenges, such as limited resources and weak enforcement, can hinder the impact of MOC in Tanzania. To complement this, FMIS provides a digital backbone for financial operations, supporting real-time data access and improving transparency. From the Resource-Based View (RBV), FMIS is a strategic asset that drives both efficiency and credibility in financial management. [15] Identified systems like TAUSI and GePG as crucial tools that have improved billing accuracy and revenue tracking across Tanzanian LGAs. Empirical findings by [29], [30] further confirm a strong link between FMIS implementation and better revenue outcomes.

Information and communication (INFC) plays a bridging role, enabling coordination between departments and supporting timely decision-making. As both a COSO element and a driver of transparency, INFC facilitates clear policy communication and stakeholder engagement [31]. Studies by [32] and [33] emphasize that effective communication improves collaboration and ensures that policies are properly executed. Collectively, these insights stress the importance of not only evaluating each mechanism on its own but also understanding how they interact. While past research has shown that MOC, FMIS, and INFC each play a role in improving revenue performance, little has been done to explore how FMIS and INFC might mediate or moderate the impact of monitoring. This study aims to fill that gap by taking a more integrated theoretical and empirical approach.

D. Research Gaps

Few case studies on public financial management and internal control systems have been explored in Tanzania, but there is a critical research gap, especially within the Local Government Authorities (LGAs). *First*, most of the previous literature has studied internal control mechanisms (e.g., monitoring, communication, and information systems) in focus, ignoring their interdependence on revenue collection. This piecemeal approach fails to account for the interplay between these elements that influence financial results. However, this study examined those interrelated effects on revenue collection.

Secondly, although some literature suggests the possible role of Financial Management Information Systems (FMIS) may have improved efficiency, few studies have empirically tested FMIS as a mediating factor linking monitoring and revenue collection in a decentralized governance structure. Also, the extent to which the role of information and communication moderates control effectiveness has received less empirical work across LGAs in Tanzania. Therefore, this research effort further extends the conceptualization by studying the mediating and moderating roles of FMIS and INFC in increasing the impact of internal control mechanisms on revenue collection to a larger extent. *Third*, theoretical integration is often missing, with many studies relying on a single theory (e.g., principal-agent theory) to the exclusion of organizational and strategic lenses such as COSO Framework or resource-based view (RBV). This reduces the supranormal explanatory power of these models to understand issues that are both behavioral and structural. So, it utilizes these three theories to encapsulate the structural dynamisms linking the variables. *Finally*, there are no site contexts regarding what is applicable concerning LGAs from Tanzania, where the challenges in institutions, capacity constraints, and adoption of technology differ widely by region. This study builds on and fills these gaps with an integrated, theory-driven analysis in the current study.

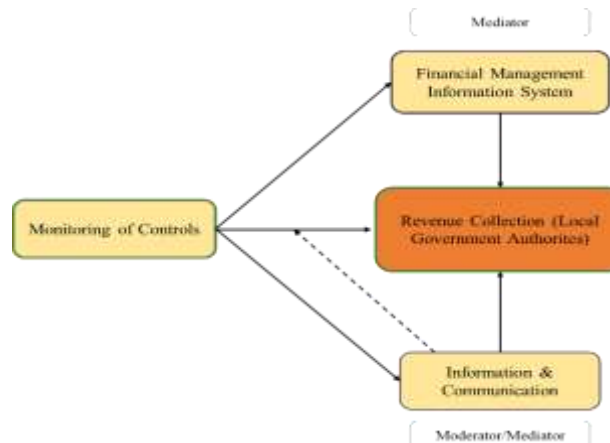


Fig. 1: Conceptual Framework (Integration of Agency Theory, COSO, and RBV)

The conceptual model (see Fig. 1) shows how internal control mechanisms affect revenue collection in Tanzanian Local Government Authorities by integrating insights from Agency Theory, the COSO Framework, and the Resource-Based View (RBV) to develop a theoretical framework. Monitoring of Controls as the leading driver, and FMIS, and Information & Communication (INFC) as both direct predictors and mediators. The model also includes an interaction effect of INFC for monitoring and revenue collection. It provides a way to incorporate direct and indirect relationships, thus extending the capacity for assessing how institutional, technological, and communication resources influence public financial performance.

E. Hypothesis Development

Monitoring of Controls and Financial Management Information System

Monitoring of controls (MOC) is essential for ensuring that financial systems like FMIS are functioning correctly and aligned with organizational goals. This study hypothesizes that MOC positively influences the implementation and use of FMIS in Tanzanian LGAs [34]. Regular evaluations, internal audits, and oversight mechanisms enable local authorities to identify gaps in financial technology usage and enforce corrective actions. The COSO framework suggests that effective monitoring supports system improvements and encourages consistent application of control procedures. When MOC is strong, it drives system adoption, improves user accountability, and ensures that FMIS functions are not bypassed or misused. Empirical research [30], [35], [36] supports the notion that the presence of structured monitoring enhances the reliability and utilization of financial information systems. This relationship is important because it suggests that MOC not only contributes directly to control effectiveness but also indirectly supports other tools, like FMIS, in achieving their intended outcomes. Hence, we can hypothesize as follows;

H1: Monitoring of Controls has a significant impact on the Financial Management Information System.

Monitoring of Controls and Information & Communication

Quality of Information and Communication (INFC) is closely related to MOC control [37]. This study posits that MOC has a significant impact on the INFC in Tanzanian LGAs [38]. The INFC element, as a major part of internal control taken into action by the COSO framework, and monitoring, is responsible for assessing how well communication systems encourage decision-making and responsiveness. When operational controls are operating, they produce reports, performance reviews, and audit results that need to be communicated to the stakeholders. Enhanced monitoring improves coordination and information flow among public sector institutions [39], [32], [40]. In this case, the hypothesis is that LGAs implementing regular monitoring should be more likely to have communication chains with limited friction, taking it simply and swiftly. This relationship is crucial as informational asymmetry and poor communication are among the factors that inhibit control, which in turn contribute to weaknesses in revenue collection performance [41], [32]. This then leads us to the next logical hypothesis;

H2: Monitoring of Controls has a significant impact on Information & Communication.

Monitoring of Controls and Revenue Collection

Monitoring of controls (MOC) is the process of regularly evaluating and further strengthening the functionality of the internal control system [42]. Efficient monitoring enables to discover gaps, upholding compliance, as well as taking remedial actions on time for the cases of LGAs. COSO framework estimates

that regular monitoring through audits, evaluations, and performance reviews will directly contribute to enhancing financial accountability and thereby reducing leakages. For instance, the research by [43] and [29] shows that long-run consistency in oversight enhances public institutions' ability to protect resources and achieve financial objectives. At the district level, supervision is often irregular due to lack of capacity in the LGAs, and therefore, results may sometimes be less than perfect. It is assumed that empowering MOC will enhance collection by ensuring adherence to fiscal discipline, prompt detection of irregularities, and conducive remedial actions. It aims to establish whether enhanced monitoring results in actual revenue performance enhancements [42], [44], [39]. With this, we can hypothesize that:

H3: Monitoring of Controls has a significant effect on Revenue Collection.

Financial Management Information System and Revenue Collection

A Financial Management Information System (FMIS) is an information system designed to automate financial operations of governmental entities and organizations, such as budgeting, revenue tracking, payments, and reporting [24], [36]. FMIS tools such as the Government Electronic Payment Gateway (GePG) and TAUSI are intended to smooth revenue administration in LGAs, obviously, not a trivial task given the diversity of LGAs' conditions [35]. As such, following the Resource-Based View [24], FMIS is considered a strategic resource that can improve financial performance if it is applied correctly. According to [15], FMIS greatly reduces human errors, improves data precision, and promotes real-time decision-making. Progressing from the past studies [15], [29], and [35] noted that FMIS implementation resulted in increased revenue collection and minimized revenue leakage under LGAs. In this research, FMIS is stated to impact on revenue collection. Digitization of revenue processes helps to ensure correct and timely reconciliation and accountability, leading to improved financial results. Therefore, it is hypothesized as follows;

H4: The relationship between FMIS and Revenue Collection is significant.

Information & Communication and Revenue Collection

INFC helps in the efficiency of internal control systems by establishing a communication channel to facilitate the quick, accurate, and reliable flow of information between various departments, officials, and stakeholders [36]. Strong communication is foundational to operational transparency and understanding, as the COSO framework emphasizes. Communication Failure: Frequent misreporting, inadequate iterations, and delayed revenue decisions in Tanzanian LGAs. Recent research studies [45], [36], and [46] have concluded that robust communication structures yield better revenue performance through feedback channels, variance alert, and consequently improve financial regulatory compliance. It, therefore, postulates that IFNC has a significant positive effect on revenue collection. Internal and external clear and accessible communication helps build trust, consolidate reporting streams, and improve coordination across sections [46], [36]. The hypothesis tests whether effective information sharing practices between LGAs lead to better revenue generation and collection efficiency. Therefore, we hypothesize as follows:

H5: Information & Communication has a significant impact on Revenue Collection.

Financial Management Information System and Its Mediating Role

The present study hypothesizes that there is a mediating effect of Financial Management Information System (FMIS) between monitoring of controls (MOC) and revenue collection (Edson, 2023). The reasoning behind this is that, while MOC was the basis for compliance and oversight, its power to drive revenue collection is that much more effective when digital systems are placed side-by-side. FMIS enables LGAs to automate notified observations, reduce errors, and get real-time reports, hence integrating the findings of monitoring into financial results [36], [46]. FMIS as a Strategic Asset: Contribution from the Resource-Based View [24] to bridge monitoring and action. According to empirical studies [29], [47], and [15], FMIS can be used as a link between the efforts of internal control and the reality of revenue performance. The study will examine this mediating relationship in order to understand whether MOC leads to increased revenue collection primarily through the deployment and effective use of FMIS. Since this hypothesis can be true, the role of digital tools in amplifying the benefit of control mechanisms becomes crucial. Based on the discussions above, the hypothesis is as follows:

H6: FMIS mediates the connection between MOC and revenue collection.

Information & Communication and Its Mediating Role

In this regard, [18] and [35] stated that Information & Communication (INFC) moderates the relationship between monitoring of controls (MOC) with revenue collection. The reason is based on the idea that although monitoring provides control and detects deviations, its impact will rely on how clearly and quickly results can be communicated within the organization. INFC is a core element attaching the control components to decision-makers and operational staff within the COSO framework. INFC is a

powerful enabler that ensures the usage of monitoring insights in LGAs is observed. INFC finds its significance in the Tanzanian LGAs set-up, where structural fragmentation and communication challenges persist [36]. The importance of rapid adaptive management and effective communication associated with a robust monitoring system has been emphasized by [32]. The study aims to test this mediating role to determine how INFC allows the effect of MOC to influence revenue collection [36]. If confirmed, the hypothesis would validate that effective internal communication is a critical driver of effective revenue collection. Based on the discussions, the hypothesis is stated as:

H7: INFC mediates the connection between MOC and revenue collection.

Information & Communication and Its Moderating Role

In addition to its mediating role, Information and Communication (INFC) is hypothesized to moderate the relationship between monitoring of controls (MOC) and revenue collection. This implies that the strength of the relationship between MOC and revenue outcomes varies depending on the quality of communication systems within LGAs [32]. From a COSO perspective, communication is not only a control component but also a contextual factor that influences the effectiveness of other controls. When communication is strong, characterized by clarity, timeliness, and accessibility, monitoring insights are more likely to lead to corrective actions and improved revenue performance [46], [18]. Conversely, in settings with poor communication infrastructure or bureaucratic delays, the impact of MOC may be weakened [40]. According to [36], the idea is that communication quality enhances the responsiveness of institutions to audit findings and internal control signals. This hypothesis seeks to explore whether INFC strengthens or weakens the effect of MOC on revenue collection, offering deeper insights into the interdependencies within the internal control environment of Tanzanian LGAs [32], [36]. Therefore, we can hypothesize that:

H8: INFC moderates the relationship between MOC and revenue collection.

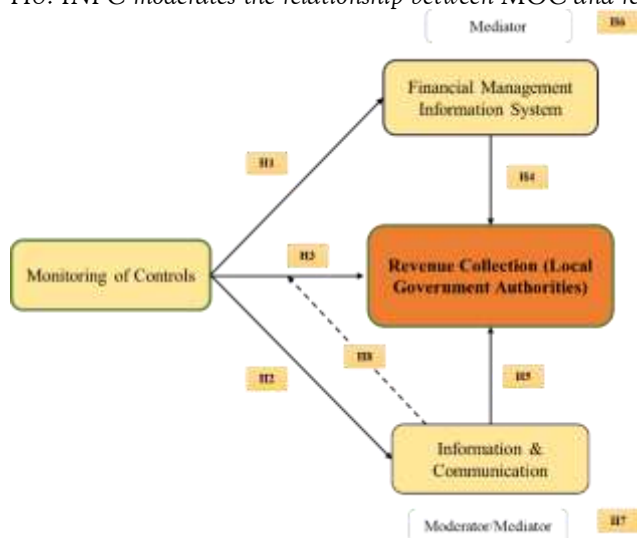


Fig. 2: Conceptual Framework & Hypothesis Indicators

The review of literature above reveals a model with hypothesis indicators created and represented in Fig. 2, and each arrow represents endorsement for specific hypotheses through direct effect and/or indirect effect via mediation or moderation relationship (see Fig. 2 shows the conceptual model). At the core, MOC is treated as an independent variable, which directly influences revenue collection (H1) and indirectly impacts revenue realization from FMIS (H4, H6), INFC (H5, H7). It also measures two possible pathways assumed by the COSO framework to be part of this process: (1) that good monitoring leads to accountability and effectiveness of internal control, which themselves lead to better financial outcomes. H1 is the direct path testing MOC on its effects on RVC; H4 tests FMIS adoption as a driver on RVC, and H5 examines the effect of INFC performance on RVC. Consistent with the Resource-Based View, the mediating hypotheses (H6 and H7) assert that FMIS and INFC are conduits of MOC to RVC. If these associations are confirmed, they suggest MOC improves income not only through observation but through a structure and funnel for communication.

The second and third hypotheses (H2 and H3) investigate the main effect of FMIS and INFC on RVC, respectively, to see how significant they are individually for enhancing revenue collection. In addition, H8 is considered the moderating effect, which means that INFC has a strengthening or weakening impact on the MOC-RVC relationship. This indicates interactive dynamics whereby if controls are stronger, poor

communication may constrain effective control actions, but radical communication could have an amplifying effect. In conclusion, the assumptions embedded in this model serve as a basis for a broad-based investigation on how the components of internal control individually and jointly affect revenue performance in LGAs.

III. METHOD OF RESEARCH

A. *Research Design*

The study applied a quantitative research method based on a primary data collection using a questionnaire, as per positivist philosophy, seeking to establish relationships systematically and objectively [48]. It aims to explain the effects of monitoring of controls, information, and communication, and financial management information systems on revenue collection of local government authorities (LGAs) in Tanzania. The use of a structured questionnaire is necessary due to limited data availability. And this also helps to acquire real-time data to capture the 'behavioural' evidence in this study. Adopting this approach enables the use of an empirical testable framework, leading to the fulfillment of the research objectives. The study uses a descriptive and explanatory cross-sectional survey approach to appraise the cause-and-effect relationships between the variables. A survey design was chosen as it provides access for large-scale sampling across a number of LGAs. The study involved 36 underperforming LGAs that failed to meet revenue targets over three consecutive years, using data from revenue administrators and managers. The design allowed quantitative data collection at a single point in time and, therefore, gave a snapshot of revenue collection practices. The explanatory design element helps the researcher look for ways in which changes in independent variables influenced levels of revenue collection efficiency. The survey strategy, meanwhile, assured broad representation and generalization of findings to the larger population in LGAs in Tanzania.

B. *Validation and Reliability of Research Instrument*

A standardized questionnaire was employed to investigate the objective of this study, with questions based on a review of the relevant literature. Items were adapted from previous studies to ensure content validity and reliability. Study variables were measured through the questionnaire, by a 5-point Likert scale, as Strongly Disagree -1, Disagree-2, Neutral-3, Agree-4, Strongly Agree-5; higher scores indicated a more positive attitude. Composite reliability was used to determine the reliability of the study and criteria with a cutoff level of > 0.7 , while convergent validity ($AVE > 0.5$) and discriminant validity were applied for validation purposes. After 33 respondents completed the pilot study, the instrument was revised to improve clarity. For the reliability and validity of the questionnaire, the results indicated that the questionnaire met the criteria concerning internal consistency (composite reliability > 0.70) and validity ($AVE > 0.50$). The instrument was divided into two sections (A & B), and it captured demographic information and construct items, making the assessment strong in data collection. The content validity of the questionnaire was tested further by experts. Therefore, the questionnaire was pre-tested with 6 experts in financial management to improve wording and content.

C. *Sampling Population & Technique*

The sample size for this study was determined using the Krejcie and Morgan Table (KMT), in which sample sizes are derived from population size at a 95% confidence level with a plus or minus 5% margin of error. The population of these 36 LGAs was proportionately worked out to be: 1,583 ($36/184 \times 8,093$). Sample size of 310 based on a population of approximately 1,600 using the KMT (Table 1). A total of 372 questionnaires were distributed, including 62, as a 20% (310) allowance for non-responses, to ensure an adequate number of valid responses were obtained (Zahl-Thanem, 2021). The sampling scale and methodological rigor both fell into place with the systematic approach of the KMT that guaranteed a sufficiently representative sample. The final sample of 372 respondents was large enough to allow generalizability from the specific target population, wherein statistical best practices were followed.

Table 1: Sample size Determination with Krejcie and Morgan Table

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	289	3500	246
25	24	130	97	320	175	950	274	4000	351
30	26	140	103	340	181	1000	276	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: “N” is Population Size, “S” is Sample Size
Source: Krejcie and Morgan (1970)

A multistage cluster sampling technique is applied to ensure national representation, according to stages. Stage one was the division of LGAs into five geographical zones (Eastern Zone, Northern Zone, Lake Zone, Central Zone, and Southern Zone). In stage 2, selection of underperforming LGAs, and stage 3, designated the sample sizes across zones per LGA, respectively. The last one imposed some restrictions on the sample selection, which was finally carried out through simple random sampling of respondents. This method allowed for diversity and reduced bias, which closely aligned with the goals of the study. The sample spanned internal auditors, revenue officers, business and finance officers, and key management personnel, providing a holistic view of how councils handle the collection of revenues. Follow-up strategies, including phone reminders and physical visits, were planned to reduce non-response bias. We took this precaution to keep the sample adequate for analysis of associations with the many variables that were recorded.

D. Data Collection

Researchers collected the data through a cross-sectional survey over three months. The questionnaire was administered using drop-off and pickup (DOPU) strategies as well as an online Google form for less easily reachable LGAs. Links to the online survey were shared on government emails and WhatsApp. Respondents were provided with 2–3 days to complete the questionnaire, and follow-up by reminders was maintained throughout the study. Researchers then edited, coded, and cleaned the collected data for analysis. This process allowed for accuracy and completeness, as well as reduced the number of errors. A cross-sectional approach was implemented to maximize data collection in a limited time, and mixed distribution methods were used for higher response rates.

E. Method of Analysis

Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to analyze the data. Unidimensionality, reliability, and validity of the measurement model were tested by confirmatory factor analysis (CFA). Results showed that items whose factor loadings were less than 0.5 were excluded [49]. Measurement model factors, Internal consistency, and Convergent validity were then measured using composite reliability (>0.7) and AVE (>0.5). Direct and indirect effects were evaluated by structural equation modeling. It is necessary to use PLS-SEM because it allows for estimating more complex relationships, checking for latent variables, and providing robust results as predictors of revenue collection [50], [49].

F. Ethical Consideration

Ethical approval was granted by the Ethics Committee of Universiti Tunku Abdul Rahman and the Tanzania Commission for Science and Technology COSTEC. All participants were given written informed consent, and strict confidentiality was maintained throughout. Research assistants were trained in ethical conduct, and the study followed all ethical standards to protect participants' rights and ensure

credible results.

IV. DATA ANALYSIS & RESULTS

A. Descriptive Analysis

Descriptive analyses were performed on three hundred and fifty-eight valid responses (358) out of the overall 372 completed questionnaires, giving an excellent response rate of ninety-six percent (96%). The information was gathered from participants in all 36 Local Government Authorities (LGAs) located in 17 regions in Tanzania; this provides a wide, country-wide dataset for the study. According to Table 2 on regional distribution, Tabora leads in contribution with 13.41 % (48), followed by Tanga at 11.73% (42) and Mtwara at 8.66% (31). At the other end of the scale, Handeni District Council was joined by Korogwe, Longido, and Moshi Municipal in recording between 4 and 8 peer respondents each. These could be a function of differences in administrative engagement, accessibility across LGAs, and/or institutional capacity.

The age profile (See Table 2) reveals a largely young to mid-career workforce. The largest group, number of respondents 26–35 (46.09%), and a very close result at the second place in the category 36–45 (34.08%). The underrepresentation of those over 45 years old implies the existence of a small and shrinking pool of highly experienced personnel, detrimental to continuity and institutional memory, in LGAs. Nonetheless, this younger workforce may be more receptive to changes through ICT and digital systems. An analysis based on gender showed a skewed distribution with 78.5% male and 21.5% female. This could point to a continuation of gender imbalances within local government jobs and might, therefore, be indicative of broader structural or cultural impediments women face in engaging with administrative and finance-related roles.

Table 2: Statistical Results on Respondents' Demographics and Roles

Indicator	Category	Frequency (F)	Percentage (%)
Age of the Respondents	26–35 years	165	46.09
	36–45 years	122	34.08
	46–55 years	59	16.48
	Above 55 years	8	2.23
	25 and below	4	1.12
Gender of the Respondents	Male	281	78.50
	Female	77	21.50
Working Experience in the LGA	1–5 years	162	45.25
	6–10 years	95	26.54
	11–15 years	52	14.53
	Above 15 years	27	7.54
	Less than 1 year	22	6.15
Position in the Council	Finance & Business Officer	77	21.51
	Revenue Officer	75	20.95
	Internal Auditor	70	19.55

	Council Member	59	16.48
	IT Manager	37	10.34
	Treasurer	32	8.94
	Chief Executive Officer	6	1.68
	Others (ICT Officer, etc.)	2	0.56

Source: Data Analysis

Most participants had 1–5 years of experience (45.25%), showing a relatively fresh workforce in public service. Common job roles included Finance & Business Officers (21.51%), Revenue Officers (20.95%), and Internal Auditors (19.55%). These roles are directly relevant to revenue management, lending credibility to the study's findings. However, the limited number of Chief Executive Officers (1.68%) and IT Managers (10.34%) may indicate underrepresentation of decision-makers or technical staff, which should be considered when interpreting implementation-related outcomes.

B. Measurement Model Analysis

The evaluation of the measurement model, which is an essential step in Partial Least Squares Structural Equation Modeling (PLS-SEM), is used to ensure the reliability and validity of constructs preceding a closer look at the structural relationship. This research focused on the following four constructs: Financial Management Information System (FMIS), Information & Communication (INFC), Monitoring of Controls (MOC), and Revenue Collection (RVC). The analysis followed the criteria of internal consistency reliability, convergent validity, and discriminant validity.

The number of Cronbach's Alpha and its unit values by constructs reflect the internal consistency reliability that is strong for all constructs (Fig. 3). Table 3 shows that FMIS exhibited the largest value of Cronbach's Alpha (0.888), followed by those for MOC (0.811), RVC (0.801), and INFC (0.772), each higher than the recommended minimum threshold of 0.7 (Hair et al., 2021). Additionally, construct reliability values were all > 0.7 for every construct and supporting that the items within each construct are measuring the same underlying concept (Table 3). This also makes sure the measurement model is internally consistent and that all of the items are suitable.

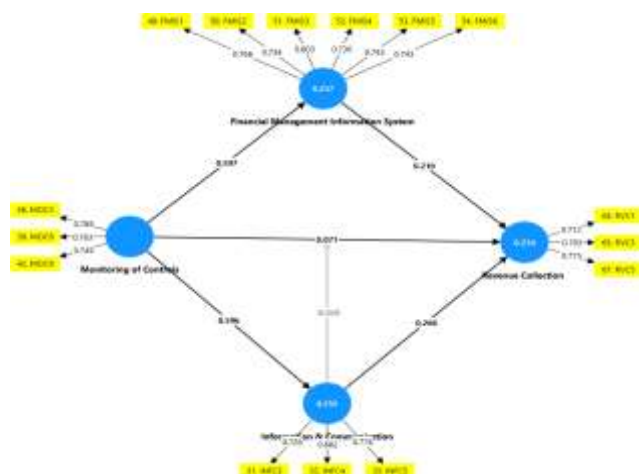


Fig. 3: Measurement Modeling Structure
Source: Analysis

The Average Variance Extracted (AVE) was used to examine Convergent validity. All the constructs had AVE values greater than the 0.5 cutoff point (Table 3), indicating that most of the variance in each construct was explained by its indicators. More precisely, the AVE of FMIS and INFC were 0.570 and 0.532, respectively; that of MOC and RVC were 0.589 and 0.574, respectively. Loading items (e.g., FMIS2 = 0.734, FMIS4 = 0.736) were above the acceptable threshold of 0.7. These results demonstrate that each construct is appropriately unidimensional. Multicollinearity was assessed using VIF, with values ranging from 1.152 to 2.097 (Refer to Table 3), well below the 5 threshold [50], [49] and the stricter 3.3 limit [51].

Thus, it implies that the multicollinearity issue is not present in the model, i.e., meaning that there are no linear dependencies between those indicators, making its score inflate the model estimation irrespective of redundancy.

Table 3: PLS-SEM Statistical Assessment

Items	Values	VIF	(α)	CR	AVE	F ²	R ²	Q ²
Financial Management Information System			0.888	0.888	0.570	0.040	0.257	0.245
FMIS1	0.766	2.097						
FMIS2	0.734	2.025						
FMIS3	0.803	2.007						
FMIS4	0.736	1.757						
FMIS5	0.743	1.641						
FMIS6	0.743	1.565						
Information & Communication			0.772	0.772	0.532	0.054	0.355	0.349
INFC3	0.726	1.157						
INFC4	0.682	1.152						
INFC5	0.776	1.171						
Monitoring of Controls			0.811	0.811	0.589	0.346		
MOC1	0.789	1.277						
MOC4	0.763	1.270						
MOC5	0.749	1.264						
Revenue Collection (RVC)			0.801	0.801	0.574	0.089	0.234	0.111
RVC1	0.712	1.157						
RVC3	0.783	1.403						
RVC5	0.775	1.304						

Note: Financial Management Information System - FMIS, Information & Communication - INFC, Monitoring of Controls - MOC, Revenue Collection - RVC.

Source: Data Analysis

To examine the discriminant validity, the same data were analyzed using the Fornell-Larcker criterion and Heterotrait-Monotrait ratio (HTMT). The results of the Fornell-Larcker criterion (Table 5) indicated that the square root of AVEs for each factor was higher than their correlation with another factor (e.g., FMIS = 0.755 > INFC = 0.418, MOC = 0.507, RVC = 0.380), demonstrating discriminant validity between the constructs (Fornell and Larcker, 1981). Given in Table 4, the HTMT values [52] are also situated below the standardized criteria for all construct pairs are below 0.850 or 0.90, e.g., FMIS-MOC (0.668), INFC-RVC (0.715), thereby supporting the distinctiveness of validity assumption as depicted by discriminant validity, which was already stated by [53]. The results also show all other constructs using HTMT with the moderating construct (INFC x MOC), and it revealed that interaction terms have decent separability in reducing construct overlap, showing an HTMT<0.850. Good recognition of reliability and validity is also shown by the measurement model, meaning that the constructs are correctly measured as well as distinguishable. Therefore, this establishes a good base in order to examine the relationships of the structural model next.

Table 4: Heterotrait-Monotrait ratio (HTMT)

	FMIS	INFC	MOC	RVC
FMIS				
INFC	0.596			
MOC	0.668	0.770		
RVC	0.510	0.715	0.562	
INFC x MOC	0.493	0.695	0.668	0.402

Note: Financial Management Information System - FMIS, Information & Communication - INFC, Monitoring of Controls - MOC, Revenue Collection - RVC.

Source: Data Analysis

Table 5: Fornell & Larcker

	FMIS	INFC	MOC	RVC
FMIS	0.755			
INFC	0.418	0.729		
MOC	0.507	0.596	0.767	
RVC	0.380	0.422	0.363	0.757

Note: Financial Management Information System - FMIS, Information & Communication - INFC, Monitoring of Controls - MOC, Revenue Collection - RVC.

Source: Data Analysis

C. Structural Model Analysis

In PLS-SEM, the purpose of testing and analyzing a structural model is to determine whether our theoretical relationships between latent constructs are significant or not, and they also measure how much variance in which dependent (criteria) variable(s) can be explained by independent (predictor) variable(s). The analysis is interpreted from a series of statistical indicators such as path coefficients (β), t-values, p-values, R^2 (coefficient determination), Q^2 (predictive relevance), and effect size (f^2) that provide the strength, directionality, and significance to allow surveillance of relationships within the model.

The structural model (as shown in Fig. 4) confirms that there is 25.7% of the variance in FMIS, 35.5% in INFC, and 24.5% in RVC. All these R^2 values are in the range of moderate explanatory power in the behavioral or social sciences, indicating an adequate fit to variance in the outcome variables for this model (Hair et al., 2021). Furthermore, the Q^2 values for FMIS, INFC, and RVC are greater than zero, revealing that the model proposed in our study performs well. For instance, the Q^2 value for RVC is 0.111 (Refer to Table 3), indicating that this model predicts the endogenous construct more than adequately (Chin, 1998).

An examination of the effect sizes (f^2) (See Table 3), indicates that contributions from individual constructs are small-to-moderate; $f^2 = 0.040$ for FMIS $\rightarrow$ RVC, and $f^2 = 0.054$ for INFC $\rightarrow$ RVC while statistically significant, these effect sizes reveal that each predictor accounts for a relatively small to moderate proportion of the overall variance in revenue collection. This lines up with the R^2 coefficients and indicates that there are other extraneous or unobserved factors that might be determining the outcome as well. As a result, the substantial assessment points to significant pathway coefficients results demonstrating that great interrelation is found among the studied variables.

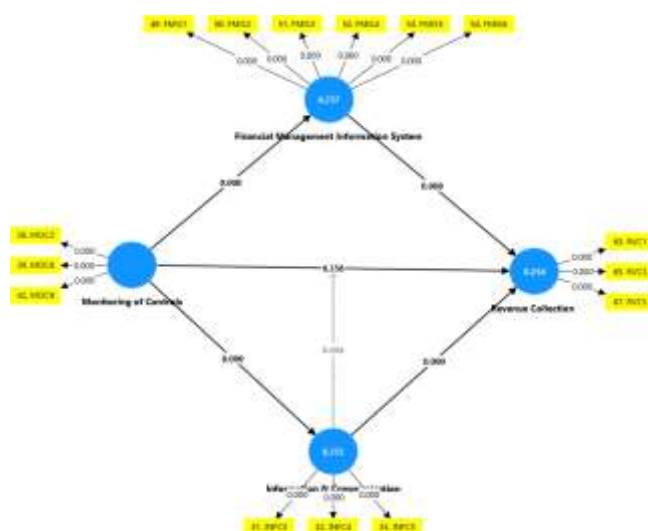


Fig. 4: Structural Mode Assessment

Source: Analysis

V. FINDINGS & DISCUSSION

By examining the impact of internal control components on LGAs' revenue collection, the structural model assessment reveals how these components influence revenue collection. It provides evidence for mediation by FMIS and INFC, increasing our understanding of the roles information systems play in effective revenue collection. The empirical results in direct effect have displayed that Financial Management Information System (FMIS) has shown positive influences on Revenue Collection with a

strong significant level of 5% ($\beta = 0.210$, $p = 0.008$) [See Table 6] at preliminary stage which suggest that digital financial systems are useful tools to manage and achieve better revenue performance outcomes. In other words, the study showed FMIS had a strong and statistically significant positive impact on revenue collection in Tanzanian LGAs. This implies that digital financial systems deployed increase transparency, efficiency, and accountability of the races, which directly translates into higher revenue generation. This emerging theme backs the Hypothesis H4, which suggests that FMIS affects revenue collection attributable to financial process performance in the LGAs of Tanzania. Consistent with the perspective of Agency Theory, accountability and control are used to mitigate information asymmetry. FMIS allows agents (public officers) to perform their duties in the principal's interest. The Council of the Sponsoring Organizations will encourage all FMISs to build a close association with the COSO Framework to improve internal controls. The FMIS is hence categorized as a valuable and rare resource that capitalizes on organizational efficiency and revenue performance from the perspective of the Resource-Based View (RBV).

The results indicate that information and communication (INFC) had a significant and positive effect on revenue collection in Tanzanian LGAs ($\beta = 0.266$, $p < 0.001$) (Table 6), supporting H5. Effective outreach, accurate data sharing, and transparent communication helped coordinate revenue activities and address weaknesses promptly. This aligns with the COSO framework, which emphasizes that relevant, accurate, and timely information must reach the right people to support decision-making and accountability. From Agency Theory, concise and prompt communication reduces information asymmetry between LGAs' officials and the public, fostering a common understanding of revenue matters. Under the RBV theory, effective information and communication represent a strategic resource that ensures revenue mobilization and institutional efficiency. Similar findings in Ghana [54] and [55] show that structured internal reporting and regular feedback improve compliance and reduce leakages. The Controller and Auditor General (CAG) reports for the financial year 2022/2023 noted that councils with consistent communication of revenue targets and variances performed better than those with poor information flow. Strengthening both the content and process of communication-whether verbal, written, or digital, is essential for improving revenue collection and public trust.

Table 6: Constructs and Correlation Effect Assessment

Relationship Effect	β eta	Standard deviation	t-value	P-v	Decision
Direct Effect					
FMIS→RVC	0.210	0.079	2.669	0.008	<i>Supported</i>
INFC→RVC	0.266	0.066	4.058	0.000	<i>Supported</i>
MOC→FMIS	0.507	0.070	7.243	0.000	<i>Supported</i>
MOC→INFC	0.596	0.044	13.453	0.000	<i>Supported</i>
MOC→ RVC	0.071	0.077	0.920	0.358	<i>Not Supported</i>
INFC x MOC→RVC (Moderating)	-0.028	0.054	0.519	0.604	<i>Not Supported</i>
Indirect Effect (Mediating)					
MOC→INFC→ RVC	0.158	0.041	3.872	0.000	<i>Supported</i>
MOC→FMIS→ RVC	0.107	0.046	2.313	0.021	<i>Supported</i>

Note: Financial Management Information System - FMIS, Information & Communication - INFC, Monitoring of Controls - MOC, Revenue Collection - RVC.

Source: Data Analysis

Table 6 shows that effective Monitoring of Controls (MOC) highly affects the Financial Management Information System (FMIS) ($\beta = 0.507$, $p < 0.001$) and Information & Communication ($\beta = 0.596$, $p < 0.001$) practices within LGAs in Tanzania. This will enable the internal system to improve, financial transactions details appropriately reported on time, and communication done immediately whenever the need arises, thus making revenue collection management and service delivery system more serious. The results confirm both H1 and H2 that effective monitoring supports FMIS, provides good quality information and communication, which then increases local government financial system performance. This is consistent with the COSO Framework, which identifies that monitoring is a crucial element of an

internal control. Accordingly, MOC mitigates information asymmetry under Agency Theory and increases monitoring capacity. The RBV in the case of these FMIS and communication systems sees effective monitoring to secure utilization as strategic organizational resources; therefore, ranked as industrial aids.

Research has shown that robust monitoring mechanisms have contributed to the improvement of financial systems and communication infrastructures. For instance, Studies by [56] and [57] showed that monitoring increases FMIS accuracy and transparency. [58] Also noted that communication technologies need to be monitored closely in order to have regular updates and safe sharing of information. When MOC functions properly, it helps institutions to identify anomalies and enforce compliance that will lead to better accountability and improved service delivery across the LGAs. Weak institutional capacity may impact the monitoring effort [59]. [60] Claimed that in the absence of proper training, as found in most departments, the benefits from information technologies for both FMIS and INFC performance are minimal at best, given that monitoring could be merely symbolic. Robust monitoring systems ensure that public systems are trusted by Tanzanian SMEs, processes are transparent, and also improve the usability of financial platforms and communication tools used in local revenue transactions.

As shown in Table 6, the study shows that Monitoring of Controls is significant for internal governance but has no contribution to an increase in revenue collection from the Local Government Authorities (LGAs), indicated by ($\beta = 0.071$; $p=0.358$). Thus, control monitoring by itself may not result in meaningful revenue gains without the application of systems or conditions that can help support this effort. H3 (MOC impacts revenue collection) was not supported. Although MOC is necessary, it alone does not generate material benefits in the form of higher revenues. This finding challenges the importance of monitoring emphasized in the COSO Framework and Agency Theory. MOC, in an RBV view, may have no value by itself; it does not consistently have number-type action-abilities like FMIS or INFC.

One central view of good public financial management is the necessity to have effective internal control systems in place. [36] Connotes that weak controls lead to fraud and misreporting, affecting the integrity of revenue goals. Sustained revenue performance requires transparency and accountability, which monitoring ensures, as stressed in [61]. These studies are equally clear that the value of MOC is indirect (by increasing FMIS systems, which in turn affect revenue). This may account for why a direct effect was not observed in the present study. In contrast, [59], [61] concluded that effective monitoring directly affects the income profile of municipalities by preventing leakages and promoting compliance. They suggest that tighter financial controls eliminate erroneous activities, which in turn ensures more revenue. Nonetheless, these could represent settings with greater enforcement than what is observed for Tanzania's LGAs. This suggests that merely improving monitoring would not strengthen public revenue collection systems for LGAs, if not accompanied by process reforms like automation, transparency tools, and simplification of requirements for compliance.

Monitoring of Controls (MOC) has no direct relationship with revenue collection; however, its effect is mediated through FMIS ($\beta = 0.107$, $p=0.021$) and INFC ($\beta = 0.158$, $p<0.001$) [Table 6]. These operational systems are enhanced by MOC with concomitance that strengthens revenue collection performance in Tanzania among LGAs. This supports H6 and H7 that there is a mediation effect of FMIS and INFC on the relationship between MOC and revenue collection. MOC by itself is not enough, unless it is operationalized by FMIS and INFC. The above finding is consistent with Agency Theory, COSO, and RBV. While COSO emphasizes that MOC are necessary to the functioning of control activities, RBV explains that FMIS and INFC are core competencies that convert internal control resources into observable performance results (e.g., better revenue collection) [62]. Similar results further highlight that internal controls are crucial for optimal revenue generation [44]. It ensures an efficient and transparent system, a minimized fraud rate, and more accurate data [63], [64]. FMIS tracks resources and prevents leakages [62], [15], while INFC ensures electronic systems and communication needed to make infrastructure support efficient tax collection [62]. These pathways illustrate that though MOC may not drive revenue directly, it builds up the enabling systems that do. Some studies even report limitations in LGAs, despite hypothetical and intuitive grounds. Weak implementations, failure to establish a proper internal control frame, also reduce the effectiveness of MOC [29], [65]. Additionally, the benefits are further watered down by mismanagement and loss of assets or systems such as FMIS, which may be highly underutilized [39], [44]. These problems compromise what MOC can tangentially do for revenue results. This finding is beneficial for LGAs' transparency, and good monitoring systems, such as FMIS or digital infrastructure, can increase trust and compliance in local tax systems that foster more voluntary participation in formal revenue collection streams.

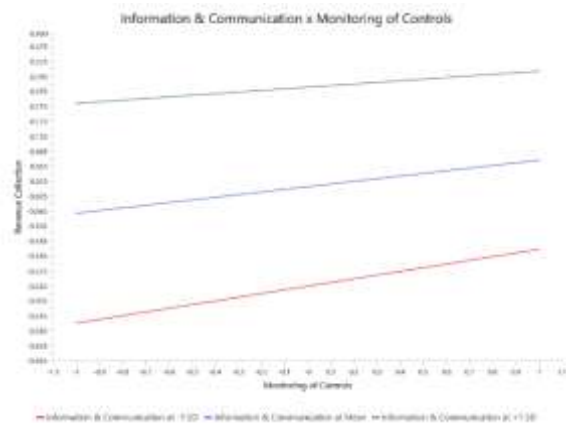


Fig. 5: INFC x Monitoring of Controls -> Revenue Collection

The result (Shown in Fig. 5) indicates that Information and Communication (INFC) does not have a significant moderating effect ($\beta = -0.028$, $p = 0.604$) on the relationship between Monitoring of Controls (MOC) and revenue collection in Tanzania Local Government Authorities (LGAs). INFC systems do not significantly contribute to the strength of revenue collection efficacy. The hypothesis 8 (H8) is rejected. This stands in part contradiction to the COSO Framework, which highlights effective communication in strengthening internal controls. Further, it deviates from the RBV posits that information systems are strategic assets that aid performance outcomes, such as revenue generation, when employed strategically. Some evidence suggests the possibility that weak moderation could be due to inefficient or poorly designed INFC systems [32]-[36]. The effectiveness of decision-making is compromised by the inferior quality of or delayed information [66]. Communication systems and tax strategies can also be rendered ineffective by the misalignment of them [67]. In this condition, INFC may not greatly increase the control-revenue connection [42].

Similarly, other studies have claimed that ICTs and communication tools could also play an important role in improving the transparency, accuracy, and effectiveness of revenue collection [35], [17]. According to [42], electronic systems and mobile apps lead to higher revenue efficacy, compliance adherence, especially with synergic integration with control mechanisms. This is considered as one weak moderating effect, which means that even though digital systems are in place, LGAs may still be experiencing issues with compliance due to malfunctioning system alignment, underutilization of the systems, and poor communication between stakeholders and revenue authorities.

VI. CONCLUSION & CONTRIBUTIONS

This paper aims to examine the effect of the Internal Control mechanism, which includes monitoring of controls (MSOC), financial management information systems (FMIS), and information and communication (INFC) has on revenue collection in Local Government Authorities (LGAs) in Tanzania. The results indicate that FMIS and INFC have a significant positive impact on revenue collection, which confirms their importance in improving efficiency, transparency, and accountability of public finance. On the one hand, MOC had a non-significant direct effect on revenue collection, but a significant indirect pathway through it improved FMIS and resulted in better INFC, which led to improved revenue performance. This, again, highlights that monitoring tools in the absence of an efficient digital architecture and communication setup would not help to enhance outcomes in revenue collection. These findings underscore the importance of integrating control mechanisms with operational technologies and communication practices. Strengthening digital infrastructure, improving human capacity, and enhancing accountability remain essential for building financially sustainable LGAs.

A. Theoretical Contributions

This paper contributes to the studied theories by offering not only a better understanding of how the internal control components affect public sector revenue collection but also extending the dimensional effects of internal control mechanisms, from an agency perspective, COSO Framework, and RBV, and the relation between them. From the Agency Theory perspective, the study highlights how digital systems (FMIS) and communication channels (INFC) help reduce information asymmetry and strengthen monitoring, thereby improving compliance and enforcement. Concerning the COSO framework, the findings show that monitoring of controls (MOC), although emphasized as a key component, achieves meaningful results only when embedded within operational systems such as FMIS and INFC. This

suggests that internal control outcomes are not stand-alone but depend on how well they are integrated with technological and communicative structures. Through the RBV lens, FMIS and INFC are shown to function as strategic organizational resources. When properly aligned with monitoring practices, they evolve into distinctive capabilities that improve revenue mobilization and enhance institutional performance, particularly in developing economies. Overall, the study contributes to theory by demonstrating that control effectiveness is contingent on digital and communicative capabilities, thereby updating models of internal controls and public sector performance.

B. Practical and Policy Contributions

Significantly, this study provides important strategies to policy makers, local government revenue administrators (revenue officers, internal auditors, and finance managers) in LGAs in Tanzania, and practitioners. It highlights the importance of *strengthening the capacity of digital tools* and communication systems to support efficient revenue collection. The significant positive effects of FMIS and INFC on revenue mobilization imply that the adoption of digital solutions may not only be beneficial but essential in enhancing financial performance and accountability. Ensure integration of FMIS in planning and budgeting, accounting, and reporting by LGAs, as well as improve information and communication systems to promote transparency and real-time decision-making.

Additionally, *aligning monitoring with Technology*, that the Management of controls will not increase revenue collection performance without the influence of effective digital systems support. Thus, through FMIS and INFC, a need for oversight is revealed to align with digital tools. Hence, the practitioners need to begin with *capacity-building* programs that integrate control functions and ICT and financial management practices. The study also warns that *policy and institutional reforms*, the potential of digital and control systems is far from being realized if system design, training, and infrastructure support are not complementary. The evidence from this study can guide policymakers in designing financial decentralization strategies, institutional reforms, and digital systems investments. These reforms should emphasize not only system adoption but also accountability mechanisms and transparency practices. Moreover, for the *industry and innovation*, for FMIS platforms developers and communication infrastructures providers, the findings highlight the need to design solutions tailored to LGAs' realities. This opens opportunities for innovations and customization in digital financial management systems.

Taken together, the findings from our survey provide a pragmatic path for expanding revenue generation by promoting digitalization, strengthening accountability mechanisms, and nurturing a culture of transparency and effort monitoring within LGAs.

VII. LIMITATIONS & RECOMMENDATIONS

Findings from this study have important implications for the functioning of internal control mechanisms, but some limitations need to be mentioned. The cross-sectional design of this study does not allow inference of causality. The data represents a snapshot in time and may not account for changes in internal control activities or revenue trends after this point. The study suggests that longitudinal designs could be useful for future research to show how changes in internal controls relate to the timing of revenue collections through fiscal periods. Second, although the use of structural equation modeling (PLS-SEM) is a strong method for examining complex relationships, the analysis was conducted on self-reported survey data. Response bias may be introduced, especially when discussing governance and financial management practices like those of revenue collection. For example, document reviews, qualitative interviews, or audit reports could be conducted to validate and enrich quantitative findings in future studies.

Other contextual characteristics, such as political factors, organizational capacity, or leadership styles, are not investigated and could potentially moderate the effectiveness of internal controls. This confounding suggests that future models might benefit from including these factors to further explore the environments in which internal controls work best. The study recommends mixed-method, broader use of administrative data, and the inclusion of context in the policies. In addition, LGAs should provide ongoing support for training and change management efforts, as well as system upgrades to ensure the sustainability and effectiveness of FMIS and INFC in enhancing revenue collection outcomes.

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