

2022-08-02

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Scientific Research Publishing Inc.

<https://doi.org/10.4236/jfrm.2022.113025>

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Challenges Affecting Effective Implementation of Financial Management Information Systems in Local Government Authorities in Tanzania as Part of the Digital Ecosystem

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How to cite this paper: Pasape, L., & Godson, E. (2022). Challenges Affecting Effective Implementation of Financial Management Information Systems in Local Government Authorities in Tanzania as Part of the Digital Ecosystem. *Journal of Financial Risk Management*, 11, 522-548. <https://doi.org/10.4236/jfrm.2022.113025>

Received: June 13, 2022

Accepted: July 30, 2022

Published: August 2, 2022

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Abstract

This study examined the obstacles to the efficient implementation of the Financial Management Information System (FMIS) by Tanzanian local government authorities. To formulate and test the dependency of variables, the researchers used both descriptive and inferential statistics, including a chi-square test. According to the findings, FMIS deployment faces technical, user, and organizational-related challenges. The study recommended that the Tanzanian government, through the Ministries of Finance and Planning, President's Office Regional Administration, and Local Government Authorities, continue to offer a full commitment to ensuring the effective implementation of FMIS by guaranteeing the constant supply of electricity in all district councils; the supply of modern computing machines; good organizational management; as well as staff facilitation and motivation. In addition to the internal workforce, the engagement of qualified firms and consultants from the private sector to assist with the implementation of successful change management is strongly advised.

Keywords

Financial Management Information System, Local Government Authorities, Digital Ecosystem, Tanzania

1. Background

Local government administration, particularly in Africa, has been a fascinating

topic because of the necessity to integrate with the central government and the rest of the world in terms of digital financial management systems and ecosystems. A digital ecosystem, according to [Hadzic and Dillon \(2008\)](#), is a dynamic and synergetic complex of digital communities that consists of interconnected, interrelated, and interdependent digital species that interact as a functional unit and are linked together through actions, information, and transaction flows. The ultimate goal is for the system to become more efficient, effective, reliable, and secure across all sectors of the economy, including local government governance, especially in Africa. [Boland and Hirschheim \(1987\)](#) reported that Financial Management Information Systems (FMIS) were created to assist financial managers in making choices about a company's financing as well as the allocation and control of financial resources inside a company.

The Financial Management Information Systems are capable of recording, controlling, and reporting on all financial-related matters, among other things. According to the [World Bank \(2011\)](#), FMIS can be broadly defined as a set of automation solutions that help governments plan, execute, and monitor their budgets by assisting in the prioritization, execution, and reporting of expenditures as well as the custodianship and reporting of revenues. As a result, FMIS solutions can help government processes become more efficient and equitable. According to the [World Bank \(2000\)](#), proper implementation of FMIS improves financial control and reporting. The FMIS is usually referred to as an integrated financial management information system because of the integration need (IFMIS). Unfortunately, using the term "integrated financial management information system" to describe a system that can capture all of the functional operations and important financial flows within public spending management can be misinterpreted ([Diamond & Khemani, 2006](#)). It should be mentioned that the term "FMIS" has been used in this study to refer to an Integrated Financial Management Information System (IFMIS).

According to [Muwema and Phiri \(2020\)](#), progressive governments all over the world strive for efficient public finance management in order to properly manage resources and minimize opportunity costs connected with public procurement. The Government of Zambia, for example, has implemented Integrated Financial Management Information Systems (IFMIS) to track how ministries, departments, and other state bodies spend cash in real time in order to improve budget execution. The overarching goal is to achieve transparency, prevent financial leakages, and ensure accountability in the use of government resources.

In Tanzania, the FMIS has been in use since 1998, and it is one of the first systems of its kind in East Africa. It has proven to be very beneficial as a central payment, accounting, and reporting system, and it has been pushed out to all Ministries, Departments, and Agencies (MDAs), sub-treasuries, and regional administrations, as well as numerous Local Government Authorities (LGAs) around the country. During the financial year 2008/09, the Government of Tanzania started the Public Financial Management Reform Program (PFMRP) to

develop accountable and transparent institutional management and operational arrangements for aggregate fiscal discipline, strategic prioritization of expenditure, and improved performance during budget execution. As reported in the *President's Office, Regional Administration and Local Government Tanzania-PO-RALG (2022)*, the goal is to ensure efficiency, effectiveness, transparency, and accountability in the use of public financial resources by strengthening the capacity of regional financial and computer specialists and facilitating LGAs on financial and computer systems.

As seen in the *Public Financial Management Reform Programme (PFMRP) Progress Report (2009)*, this programme has considerably improved the timeliness and quality of expenditure data generated. During implementation time, the software (EPICOR), which helps the government of Tanzania manage income and expenditure to streamline processes and improve efficiencies, has been upgraded to include new features and make use of better networking, reporting, and processing capabilities. The role of FMIS, according to the *PFMRP Progress Report (2013)*, is to assist the country's budget release, voucher preparation, payments, accounting, and reporting operations. Despite these accomplishments, the system continues to face significant issues that have gone unaddressed for the past 15 years. During the 2021/22 financial year, the LGA started using the Government Payment System (MUSE), also known as "Mfumo wa malipo ya Serikali" in Swahili. This system was developed by experts from the Ministry of Finance and Planning in collaboration with other public institutions with the aim of reducing costs and facilitating access to financial information as reported in *PO-RALG (2022)*. According to *Public Expenditure and Financial Accountability (PEFA) (2022)*, MUSE has been recorded as a strong financial management system which has been used for significant improvements in financial management, focusing on more modern and flexible cash planning and commitment control systems that support budget predictability while controlling the fiscal deficit.

Previous experiences with financial management in LGAs were not good. According to *PEFA (2013)*, local government FMIS implementation sites have major capacity and implementation challenges, with over half of them not updating their chart of accounts in the last eight years. The system's unit of the accountant general's office has limited capability, necessitating continuing reliance on the vendor. As a result of these issues, financial reporting is delayed, and the quality of accounting and reporting in MDAs is doubtful, with external audit reports urging that these defects be fixed on a regular basis. This necessitates a careful examination of the history and current state of the LGAs in terms of financial management.

A local government authority is defined as a part of the government of a country operating at a local level, functioning through a representative organ known as a council, and established by law to exercise specific powers within a defined jurisdiction (*Warioba, 1999*). According to *Jaba (2010)*, local govern-

ment authorities have administrative jurisdiction over territories that are smaller than a state. The term is used to distinguish federal offices from those at the national-state level, which are referred to as the central government, national government, or (where relevant) federal government. According to experts, it is a subnational, semi-autonomous level government that performs its functions in a specified territory inside a nation. Local governments are the most accessible levels of government, and they are responsible for satisfying the political and material needs of individuals and communities in a certain area. Such areas could be in a rural or urban setting; a village, a town, or a suburb of a city, depending on their size.

Tanzania's local government authorities system has a tumultuous past. The system, which dates back to 1926 when it was founded by the colonial authorities, has undergone adjustments that reflect the changing national attitude regarding the country's economic and social development. The most significant change happened between 1972 and 1984, when the government dismantled local government authorities as well as all of the institutions that supported them. The current local government system was restored in 1984, following the passage of the Local Government Act of 1982, as revealed in [Ngwilizi \(2002\)](#). Regarding reforms in local government, according to [Bird \(2003\)](#), throughout the last few years, the globe has observed governments, particularly developing countries, reforming their local government authorities (LGAs) in a variety of sectors. Tanzania has fully committed to reforming the operationalization of the local authorities for better service delivery and resource efficiency, as this is one of the pillars of the good governance ideology.

Despite a number of reforms, local governments are facing a number of challenges. The key problem areas, according to the [PFMRP \(2009\)](#), are the MDAs' failure to provide in-year budget execution reports as well as the summary-style coverage of the annual financial statements. Fiscal reports (summaries of revenue, expenditure, and the deficit and its financing) are useful and released on a regular basis, but they do not include specific revenue or expenditure information. Both in-year and year-end reporting should be improved, and the data should be published on time.

A number of progressive steps have been reported in the [Public Expenditure and Financial Accountability \(PEFA\) Performance Assessment Report \(2017\)](#) since the PEFA assessment in 2013 as follows: The National Assembly Standing Orders are being updated; The Budget Act (2015), describing the documents, contents, steps and responsibilities for the budget and Medium-Term Expenditure Framework (MTEF) and to bring all finances under the Consolidated Fund; The Accounting Procedures Manual (2016) was reviewed to enable migration to accrual accounting; The Tax Administration Act (2015) was reviewed to establish a common tax procedure by TRA and enforce the use of Electronic Fiscal Devices (EFDs); The Local Government Finances Act (1982, amended 2016) was reviewed to increase and improve LGAs' own sources of revenue collection, in-

cluding business licenses and property taxes; TRA is now in charge of collecting property taxes. The VAT Act (2014) was revised to reduce exemptions and incorporate international best practices. The Government Loans, Guarantees, and Grants Act (1974, as amended in 2017) and its regulations were reviewed in order to establish the Debt Management Office and introduce risk assessment requirements. The Registrar Act (2002, amended 2010) has been revised; parastatal acts have been reviewed to harmonize with the new TR Act. However, the revised TRA Act had yet to be enacted. The Public Private Partnership (PPP) Act (2010) was revised to bring the PPP unit under MoFP from the Prime Minister's Office; Publication of the Accounting Procedures Manual in 2016 describes most PFM processes and responsibilities for budgeting, accounting, and payments in government.

However, challenges still exist on implementation of FMIS as reported in PEFA (2022), particularly on areas of operations outside financial reports; fiscal risk reporting; public asset management; fiscal strategy; legislative scrutiny of budgets; revenue administration; accounting for revenue; predictability of in-year resource allocation; procurement management; internal controls on non-salary expenditure; financial data integrity; in-year budget reports; and external audit. Furthermore, McChlery, Godfrey, and Meechan (2005) stated that, despite a number of challenges, financial management systems play a significant role in the economy, such that their presence results in robust management accounting and financial accounting systems, whereas their absence results in weak systems. According to Tikk and Almann (2011), by developing the information technology infrastructure, the integration of financial systems will result in a semantically and organizationally interacting information system that can be used in real time at all managerial levels in all enterprises.

Using the following research questions, this study aims to investigate the key issues impacting effective implementation of the financial management information system in Tanzanian local government authorities: 1) in what ways do technical challenges in terms of software and hardware affect effective implementation of the financial management information system in local government authorities in Tanzania; 2) to what extent do users' capacity, commitment, and attitude contribute towards effective implementation of the financial management information system in local government authorities in Tanzania; and 3) in what ways organizational challenges in terms of arrangement, legal framework, and monitoring and evaluation procedures affect effective implementation of the financial management information system in local government authorities in Tanzania?

2. Literature Review

According to Chetan (2015), the notion of a management information system (MIS) has only been around for perhaps a decade or so. Its function in an organization is akin to that of the human heart. As demonstrated by Sequeira, Pai,

and Surehka (2012), most large and small firms use computer-based information systems with centralized, decentralized, or scattered networks that connect data flow from and to multiple departments or branches. Furthermore, according to Martin (2015), Manning, Shepherd, and Guerrero (2010), IFMIS is a standardized monitoring and reporting system that consolidates all of a government's information needs into a single information database, allows for consistent recording and reporting of information, and allows a government to take macro decisions that affect the country in order to support distinctly public sector functions and communicate all financial movements for the country.

Accounting information systems research, according to Mauldin and Ruchala (1999), has come from a range of domains, including computer science, cognitive psychology, and organizational theory. In this regard, it has been said that previous applications of information technology in accounting systems were essentially transactional operations that would replicate manual activities. As a result, future research on accounting information systems must incorporate and integrate different accounting sub-disciplines. Mutui (2014) defines IFMIS as the computerization of public financial management (PFM) processes, ranging from budget preparation and execution to accounting and reporting, through the use of an integrated system for financial management of line ministries, spending agencies, and other public sector operations. Financial Management Information Systems (FMIS), as recommended by the World Bank (2009), support the automation and integration of public financial management processes such as budget development and execution (e.g., commitment control, cash and debt management, treasury operations), accounting, and reporting.

The implementation of financial management information systems has been one of the most pressing challenges in LGAs. A lot of authors believe that any effective financial management information system requires information that is relevant, understandable, and timely. Investors, development partners, and other external stakeholders demand essential decision-making information on critical investment questions, as well as the potential risk associated with that return. According to Hoogervorst (2011), despite the vast amount of information available in today's public company filings and reports, this information does not always assist investors in answering these basic questions because it is not clear enough to provide users with an accurate picture of the true situation.

One of the most pressing difficulties in LGAs has been the introduction of financial management information systems. According to a number of experts, every good financial management information system requires relevant, intelligible, and timely information. Investors and other external stakeholders require crucial information to make critical investment decisions, as well as the potential risk associated with that return. According to Hoogervorst (2011), the large amount of information available in today's public company filings and reports does not always aid investors in answering these basic questions since it is not clear enough to offer users with an accurate image of the genuine situation. The

timing and method in which financial information is delivered will be the most significant changes in the future. The reporting trend is shifting away from providing reports and schedules produced before modern technological platforms and toward a demand-driven approach in which users receive and retrieve the information they deem most valuable in real time. Consumers should have access to information in a way that best suits their needs, preferably in real-time or near real-time; yet, there are still a number of challenges.

According to research conducted in Tanzania, Ghana, Uganda, Malawi, Kenya, and Rwanda, a number of issues could hinder the successful deployment of an IFMIS (Diamond & Khemani, 2006; Rodin-Brown, 2008). Several scholars have attempted to identify the barriers to the proper adoption of financial management information systems; these barriers have been classified as technological, user, and organizational setup. Technical issues are those that have an impact on the operation of devices such as computers, as well as their hardware and software. Many FMIS attempts have failed because the critical system functionality was not specified from the beginning. FMIS, according to Chene and Hodess (2009), must be correctly designed to meet the needs and functional requirements, which include accounting and financial management responsibilities. It is necessary to assess the type of computer hardware and software to be used, as well as the systems that will be implemented, such as off-the-shelf (OTS) or custom-built systems that fit the requirements of the given country. It is worth emphasizing that the complexity of the system, rather than the type of off-the-shelf or custom-built system, is a determining factor in the success of the implementation. A technical analysis of the FMIS, according to Cain (2001), should highlight the system's strengths and shortcomings while taking into account the overall picture of what the system is anticipated to accomplish. On the other hand, user challenges are those that affect system users on a daily basis.

As a result, personnel with the necessary knowledge and skills are required for the proper implementation, operation, and maintenance of FMIS. According to Brar (2010), one of the major challenges in developing nations' FMIS adoption is a lack of competency for system implementation at the sub-national level, such as district and regional governments. Furthermore, FMIS implementation is a complex, risky, and resource-intensive process that necessitates major procedural changes and frequently involves high-level officials who lack incentives for reform change in technology, processes, and procedures, as well as skills, responsibilities, and behaviors, according to Chene and Hodess (2009), and Rodin-Brown (2008). Because of the project's nature and complexity, it is vital that all participants comprehend the breadth of the endeavour. This is especially important in Tanzania, with its local government entities and the resulting demand for skills and experience, which is already in short supply due to the duplication of efforts. Farelo and Morris (2006) believe that government human resource development should be priority. The country's education system must be aligned with the demands of information and communication technologies

(ICT), and limited ICT talents must be sought and preserved, particularly within government.

Furthermore, organizational challenges influence the effective implementation of FMIS in organizations that are contemplating it. FMIS, according to [Chene and Hodess \(2009\)](#), comprises both efficiency adjustments that alter existing procedures and organizational reform, both of which have a substantial impact on work processes and institutional arrangements that oversee public finance management. According to the [International Consortium on Governmental Financial Management—ICGFM \(2008\)](#), institutional transformation is difficult and requires time, devotion, champions, and courage. According to [Indeje and Zheng \(2010\)](#), implementing a new information system changes the way operations are carried out dramatically, demanding a well-managed process. This process results in the formation of a new organizational culture or a change in how the company operates.

In terms of relevant empirical research, [Muwema and Phiri \(2020\)](#) stated that there is a significant negative relationship between IFMIS and transparency, cutting financial leakages while boosting efficiency and speed. As a result, they determined that IFMIS had not improved transparency, financial leakage, efficiency, or speed. Furthermore, the research recommended that vendors and people have access to the system in order to promote transparency. The system's code must be redesigned to be more proactive rather than reactive in order to increase budget adherence and prevent misappropriation and misapplication of cash. Another recommendation was for all procurement processes to be carried out exclusively on the system, reducing the need for paper duplication.

Additionally, [Hendriks \(2012\)](#) discovered that lack of skill, lack of commitment, and institutional and technological constraints all have a major impact on IFMIS adoption. As a result, IFMIS was created. It will not always provide the capabilities and influence on public financial management that were anticipated. Major recommendations reported include: ensuring that adherence to best practice guidelines is accompanied by a capacity-building program, the commitment of all role players, the development of a legal framework, an agenda for effective change management, a strong project management team, a phased approach to implementation, and a well-defined project implementation plan. Furthermore, [Diamond and Kheman \(2006\)](#) discovered that failure to clearly specify basic functionality, failure to spend enough time on the design phase, failure to re-engineer procedures, failure to undertake parallel reforms required by the FMIS, overestimating the information to be included in the system, and a lack of incentives for reform are some of the factors affecting implementation. As a result, the government should brace itself for a protracted and tough implementation process.

[Miheso \(2013\)](#) discovered that many factors influence IFMIS deployment in his study, including top management support, human technical capacity and training, change management, phased implementation, and reliable and modern

ICT infrastructure. The research recommended that the necessary infrastructure be installed in outlying areas outside of Nairobi to ensure that IFMIS be implemented as a nationwide effort rather than simply in Nairobi. [Leiderer et al. \(2007\)](#) also looked at public finance management in Malawi: Formal and Informal PFM Institutions in a Decentralizing System for PRSP Implementation.

Also, a lack of acceptable human and technical capacity in key PFM roles, combined with poor financial, organizational, and human resource management, was determined to be one of the fundamental flaws impeding sound PFM in Malawi, according to the study. Furthermore, according to [Rodin-Brown \(2008\)](#), implementing modern financial management information systems necessitates a commitment to change: large-scale changes in technology, processes, and procedures, as well as changes in skills, responsibilities, and behaviors, must be accepted from within rather than imposed from the outside. Success in countries like the Slovak Republic is based on genuine acceptance at the highest levels of government. Too often, these projects underperform or require far more time and effort than expected due to costly errors made during the assessment and design stages, the contract process, or system implementation. Success in countries like the Slovak Republic is based on genuine acceptance at the highest levels of government. Too often, these projects underperform or require far more time and effort than expected due to costly errors made during the assessment and design stages, the contract process, or system implementation.

Furthermore, [Chalu \(2019\)](#) assessed the influence of IFMIS implementation on financial reporting quality (FRQ) in Tanzania's Local Government Authorities (LGAs). According to the findings, the implementation of IFMIS has improved the understandability and dependability of the FRQ, but the quality of relevance has not changed significantly. Furthermore, the study findings show that in order for IFMIS adoption to influence dependability quality, the control elements of utilization capacity and internal audit effectiveness must be taken into account.

The reviewed theoretical and empirical literature aided in conducting a thorough review of the FMIS, identifying the practice, and establishing the current status in terms of success and challenges toward working on the identified gaps in technical, user, and organizational challenges affecting FIMS implementation.

3. Materials and Methods

The current study included quantitative research as a main design element, and qualitative research approaches were also used to supplement the study by conducting interviews with possible FMIS stakeholders and evaluating quantitative analysis results. Furthermore, the chi-square technique was used for both descriptive and inferential analysis, giving the researcher more flexibility for in-depth data collection and analysis. The research was carried out at the Arusha District Council as a case study, with the unit of inquiry being numerous staff members of various levels, including top management, supervisors, and ordinary

rank workers from several departments, with the finance and accounting department being the main focus.

The researcher carried out a survey for the Arusha District Council since the population was not vast and there was a well-organized system where the respondents could be easily identified. The sampling strategy follows [Kothari's \(2004\)](#) theory that a survey inquiry is a comprehensive enumeration of all objects in the population, with the assumption that all aspects of an investigation are covered, particularly when the population is small, and therefore the highest accuracy is obtained. As a result, 36 employee populations were used and found to be satisfactory. Furthermore, during data collection, the researchers observed many procedures within the Arusha District Council's financial and accounting divisions. Based on [Saunders and Thornhill \(2009\)](#), structured, semi-structured, and in-depth interviews were employed to collect accurate and trustworthy data.

The researchers prepared the interview guide to aid logic and the smooth flow of questions in accordance with the criteria under investigation. The key issues of the interview guide comprise factors that represent technological challenges, user challenges, and organizational challenges. In addition, the researcher distributed open and closed questionnaires to various people within the organization in order to elicit short and long responses. The authors in accordance with the research questions and objectives created the questionnaire. There were two sections to the questionnaire. The first component gathered respondents' personal information, such as gender, age, education level, career, and length of time with the organization. Section two prompted respondents to rank FMIS Effective Implementation Challenges on a five-point Likert scale as follows: strongly agree (strongly agree), agree (moderately agree), neutral (neither agree nor disagree), disagree (moderately disagree), and strongly disagree (strongly disagree). Section two was divided up into three subsections in order to collect information on technological challenges, user challenges, and organizational challenges.

To better understand the challenges of efficient FMIS implementation in the organization, this study analyzed secondary data from multiple books, manuals, documents, and available periodical reports at the Arusha district council. Various reports from the Public Financial Management Reform Programme (PFMRP), including the Public Expenditure & Financial Accountability (PEFA) Performance Assessment Reports for 2009, 2013, 2017, and 2022, have also been evaluated.

As guided by [Byrne \(2007\)](#), the Statistical Packages for Social Sciences (SPSS) tool enables researchers to conduct both descriptive and inferential analysis using chi-square analysis. Furthermore, this study adhered to [Koross \(2012\)](#) guidelines to ensure that the questionnaire was accurate and directly correlated with the research objectives, that data was collected from the appropriate source, and that tools were pre-tested in a similar scenario to where the actual study was conducted prior to data collection and analysis.

4. Results

4.1. Demographic Profile of Respondents

Gender, age, job experience, profession, and degree of education were all investigated in the demographic profile of the respondents and reported in **Table 1**. Gender analysis found that 56 percent of respondents were males and 44 percent were females. In terms of age, the research revealed that the age group of 31 to 50 years old was the most active and productive, with larger social and economic obligations. Furthermore, the professional status of the respondents revealed that 33% were accountants and financiers, 28% were administrators, 11% were human resource officers, 6% were ICT officers, 11% were procurement officers,

Table 1. Respondents' demographic profile.

SN	Respondents' characteristics	Frequency	Percentage (%)
1.	Gender		
	• Male	20	56
	• Female	16	44
2.	Age		
	• 18 - 30 years	10	28
	• 31 - 50 years	18	50
	• 51 ears and above	08	22
3.	Professional Status		
	• Accountant/Finance	12	33
	• Administration	10	28
	• Human Resources	04	11
	• Information and Communication Technology	02	06
	• Procurement	04	11
	• Others	04	11
4.	Level of Education		
	• Primary or below	00	00
	• Certificate	06	17
	• Diploma	08	22
	• Bachelor	18	50
	• Masters	04	11
	• PhD	00	00
5.	Duration the employees have been in the organization		
	• Less than 1 year	02	06
	• 1 - 3 years	14	39
	• Above 5 years	20	55
	Total	36	100

Source: Research data (2018).

and 11% were other staff, implying that data was obtained primarily from the appropriate respondents.

On the basis of education, it was discovered that 50% of the respondents had a bachelor's degree, 22% had a diploma, 11% had a master's degree, 17% had a certificate, and none of the respondents had a PhD or a primary level of education. As a result, the study determined the appropriate level of education for dealing with FMIS. In terms of length of service, the results revealed that 56 percent of employees have been with the company for more than 5 years, showing minimal labor turnover; 39 percent have worked for 1 - 3 years; and only 6% have been with the company for less than a year. This indicates that the data was collected from respondents who had prior experience with the FMIS and were also better knowledgeable about the variables under consideration.

4.2. The Technical Challenges Affecting Effective Implementation of FMIS

When asked if there are any technological problems preventing effective FMIS adoption in their organization, the responses were 80 percent yes, 16 percent no, and 4% don't know, respectively. Lack of computer accessories, use of an old version of a computer machine, lack of regular electrical power, poor computer software security, software failure, and program expiry were all considered technical hurdles. The respondents were asked to rate the technical problems preventing effective implementation of FMIS by selecting one of five options: strongly agree, agree, neutral, disagree, strongly disagree. The results (Table 2) are as follows:

1) Lack of computer accessories

The findings revealed that a lack of computer accessories is one of the technical challenges affecting effective FMIS implementation in Tanzania's local government authorities, with approximately 50% of respondents agreeing or strongly agreeing that a lack of computer accessories is one of the challenges affecting effective FMIS implementation in Tanzania's local government authorities. Computer accessories include printers, scanners, displays, keyboards, mice, a

Table 2. Technical challenges affecting effective implementation of FMIS.

S/N Technical challenges	Response towards technical challenges in (%)					Chi square (p-value)
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1. Lack of computer accessories	22	28	19	14	17	0.73*
2. Use of old computer machine	11	42	25	14	8	0.04
3. Lack of constant electrical power	28	33	19	14	6	0.01
4. Poor computer software security	8	44	28	17	3	0.01
5. Software failure	17	47	11	14	11	0.02
6. Software expiry	6	14	25	44	11	0.001

Source: Research data (2018).

central processor unit, a hard drive, random access memory, graphics cards, and sound cards. Their primary duty is to assist in effective and efficient computer operationalization at any time during data entry, processing, reporting, or data and information storage. Thus, computers and associated accessories must be readily available for efficient FMIS deployment. Despite this need, the chi-square analysis revealed that the absence of computer peripherals had no effect on the successful implementation of a financial management information system. This is because the system can be used even if no other computer equipment, such as printers, scanners, or sound cards, is accessible. The only issue that may occur in their absence is a lack of printed hard copies during the dissemination of financial reports, particularly hard copies.

2) Use of an old computer machine

When asked if the use of an old computer machine was a technical challenge affecting the implementation of FMIS, only 14% disagreed and 8% strongly disagreed, while more than half agreed that it was one of the technical challenges in the effective implementation of FMIS in local government authorities. Most local government organizations use very old computer devices due to limited financial resources, which impacts their speed and overall effectiveness. According to the [Americas' Accountability Anti-Corruption Project \(2004\)](#), FMIS software and hardware platforms should be sustainable within the country and, where possible, built on existing systems. Out-dated and obsolete software and hardware should be gradually decommissioned and their primary programs moved to the new platform. System planners must have a well-thought-out plan in place to complete this difficult task. The central government IFMS implementation should not routinely discard existing local government systems that produce desirable results, but should instead consider integrating current systems into the IFMS framework.

3) Lack of constant electrical power

A lack of a continuous electrical supply is one of the technical hurdles in properly adopting FMIS in local government entities. According to the study's findings, the majority of respondents (61 percent) rely on Tanzania National Electricity Company for electricity (TANESCO). The availability of electricity varies and has an impact on the use of FMIS because computers and their associated accessories are powered by electricity. To mitigate this, few workplaces have access to diesel or gasoline generators, and even if they do, the operating costs are typically very high. As a result, as long as FMIS is tied to computers, energy must be one of the critical resources for its successful deployment.

4) Poor computer software security

The data clearly shows that a lack of computer software security is one of the technical issues impeding the proper adoption of FMIS in Tanzanian local government entities. 44 percent agree, while 28 percent are uncertain. Furthermore, studies indicate that most computer software is not safely updated and protected due to a lack of Internet connectivity in most local government organizations,

resulting in computer failure or poor performance. The findings back up [Chene and Hodess's \(2009\)](#) remark that an IFMIS must be correctly designed to meet the needs and functional requirements, which include accounting and financial management activities. It is necessary to determine the type of systems that will be deployed, such as off-the-shelf (OTS) or custom-built systems that match the requirements of the individual country.

5) Software failure

When combining both agreed and highly agreed replies, it is obvious that over 60% of software failures are one of the issues affecting effective FMIS deployment in Tanzanian local government bodies. Most of the time, software is unavailable, resulting in poor performance. Furthermore, it was determined that regional and municipal governments control software. In other circumstances, no one within the organization is authorized to correct any type of failure. The system cannot be accessed locally. Failure to address specific accounting and financial reporting issues relating to the system's sustainability, functioning, and extension is likely to result in increased rather than decreased levels of fiduciary risk. Furthermore, as demonstrated by GAO (2004), if the FMIS fails, there is currently no backup plan other than continuing to use existing systems in parallel, according to the associated country's financial accountability review.

6) Software expiry

Regarding the occurrence of software expiry as one of the technical hurdles of efficient FMIS deployment, the findings were as follows: Six percent strongly agreed, fourteen percent agreed, twenty-five percent neutral, forty-four percent disagreed, and eleven percent strongly disagreed. Thus, over 50% of respondents had the opinion that software expiry is not one of the major technical problems affecting efficient FMIS adoption in Tanzanian local government bodies. However, the replacement of expired software is necessary not only for the sake of computer functionality, but also to ensure that the systems provide the correct reports.

In addition to the above descriptive output, the findings from the chi-square analysis revealed that five technical challenges out of six support the hypothesis one that technical challenges in terms of software and hardware have a significant impact on the effective implementation of the financial management information system in local government authorities in Tanzania (p less than 0.05). Lack of computing accessories has no significant effect on the effective implementation of FMIS ($p = 0.73$).

4.3. Users Challenges Affecting Effective Implementation of FMIS

The current study investigated the impact of user issues on the success of FMIS deployment. The seven characteristics considered were a lack of capacity, a lack of commitment, a lack of user awareness, a poor attitude toward change, a lack of user training, a poor attitude toward FMIS among users, and a lack of desire. When asked if there were any user issues hindering the effective deployment of FMIS, 68% agreed, 28% disagreed, and 4% were undecided. [Table 3](#) highlights

Table 3. Users challenges affecting effective implementation of FMIS.

S/N Users challenges	Response towards users challenges in (%)					Chi square (p-value)
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1. Lack of user capacity	11	28	19	25	17	0.003
2. Lack of commitment	22	33	8	19	17	0.004
3. Lack of user awareness	00	17	28	44	11	*0.20
4. Poor attitude to change	22	39	14	19	11	0.02
5. Lack of user's training	25	28	22	19	6	0.02
6. Poor attitude toward FMIS to user	11	44	14	22	8	0.04
7. Lack of motivation	11	50	19	14	6	0.000

Source: Research data (2018).

the findings in terms of user-related challenges.

1) Lack of users' capacity

According to the study findings, 11 percent of respondents strongly agree and 28 percent agree that one of the users' obstacles to effective FMIS deployment in Tanzanian local government authorities is a lack of capacity. Users must have specialized abilities to operate or support FMIS. This could be expanded to include information and communication technologies, accounting and finance, monitoring and evaluation, and other closely connected fields. When a user has the necessary information and abilities, their ability to achieve desirable goals increases. In contrast, it will bring disappointment and hazards associated with poor outcomes and/or the damage of computer hardware and software. According to [Diamond and Khemani \(2006\)](#), efficient implementation, operation, and maintenance of FMIS require employees with the requisite expertise and abilities. Lack of capacity is seen as one of the primary factors in Ghana's implementation delay. The findings further support [Brar's \(2010\)](#) assertion that one of the primary obstacles to implementing an IFMIS in developing nations is a lack of capability for system implementation at the sub-national level, such as provinces and regional governments.

2) Lack of users' commitment

Concerning commitment, the study's findings revealed that lack of commitment is one of the user challenges affecting effective implementation of FMIS in Tanzanian local government authorities, as well as a lack of motivation for nearly 55 percent of respondents, when respondents who strongly agree and those who agree with this variable are considered. Commitment is strongly related to the level and quality of dedication to a specific purpose. In most circumstances, a high level of commitment enhances the likelihood of engagement and tenacity in achieving a goal. The study's findings imply that users of FMIS must be deeply committed to their cause because they will work tirelessly to achieve the country's goal of

good financial governance. Users include both LGA officials and policymakers. While [Diamond and Khemani \(2006\)](#) argue that project commitment at the highest levels of the political system, as well as bureaucracy and continuous participation from direct users of the system and other stakeholders in all phases of the project, [Chene and Hodess \(2009\)](#) argue that the Ethiopian case study has proven that what matters most in the process is mid-level management's commitment to reform, because the changes eventually have to be implemented. Furthermore, [World Bank \(2022\)](#) highlighted that Financial Management Information Systems (FMIS) support the automation and integration of public financial management processes including budget formulation, execution (e.g. commitment control, cash/debt management, treasury operations), accounting, and reporting. Moreover, FMIS solutions can significantly improve the efficiency and equity of government operations, and offer a great potential for increasing participation, transparency and accountability.

3) Lack of users' awareness

When asked if a lack of user awareness was one of the issues, none highly agreed, 44 percent disagreed, and 11 percent strongly disagreed. This means that user awareness of the FMIS is not a big issue because the majority of responsible staff handling FMIS are aware of the system and their profession requires them to assist with system deployment. The situation is comparable to that discovered in Kenya by [Kimwele \(2011\)](#), who discovered that staff of government ministries was well aware. He also discovered that IFMIS was used by 70% of the departments. IFMIS was sabotaged, according to 73% of respondents to the research questions. According to 37% of respondents, IFMIS supports proper work planning.

4) Poor attitude to change.

In terms of attitude to change, the data show that 61 percent of respondents agree or strongly agree that weak attitude to change is one of the users' difficulties affecting the implementation of FMIS in Tanzanian local government agencies. As a result, as soon as the FMIS project is conceived, a change management strategy should be developed, taking into account the change implications for diverse stakeholders, ranging from politicians and senior officials to heads of departments, civil servants, and IT personnel who will support the new systems, as recommended by [Rozner \(2008\)](#). If this is not addressed early in the project, the project will encounter constant opposition and impediments from elected lawmakers, executive officials, and workers who will utilize the systems on a regular basis. Similar to the study findings, [Diamond and Khemani \(2006\)](#) shown, using Malawian experience, that FMIS has experienced various challenges. The project implementation team lacked resources and was disbanded before the implementation was finished. Change management and communication initiatives must be prioritized, and the implementation team and ministries have differing perspectives.

5) Lack of users' training

When respondents were asked about the lack of users' training, results showed

that lack of users' training is one of the users' challenges affecting the effective implementation of FMIS in local government authorities in Tanzania. The study found that inadequate training for system users is primarily hampered by a lack of funds allocated to local government authorities' staff training, which is severely limited, affecting the effective implementation of FMIS in their organization. The result was supported by [Farelo & Morris \(2006\)](#), who contend that the human resource development issue within government needs prioritization, the education system needs to be aligned with the information and communication technologies (ICT) demands of the country, and scarce ICT skills need to be attracted and retained, particularly within government. Furthermore, training for the staff will not only include training in the use of the FMIS for their respective operations and functions, but also training in the new legal and regulatory framework, the new codes and classifications, and the new business procedures put in place. In the initial stage of implementation, there is a need to develop new practices, and the associated training requires a great deal of innovation and tailoring to the specific features and capacity of the organization. A large proportion of the training should be on-the-job training and be focused on super-users. This implies decentralised on-the-job trainers deployed throughout the implementation period. User support is also necessary as a permanent service ([Diamond & Khemani, 2006](#)). Technical help to local governments is also required in a number of sectors. Smaller local governments, in particular, require support in accounting, treasury, tax administration, data processing, and project evaluation. Shortages of competent professional accountants and the quality of potential recruitment can have a significant impact on the generation of high-quality financial data that is vital to investors. It can also stifle company growth and put the economy in jeopardy, as reported in [IFAC News \(2006\)](#).

6) Poor attitude toward FMIS

In terms of user attitudes, the findings suggest that only 55% agreed that it had an impact on FMIS implementation, while 30% disagreed and 22% were neutral. These findings indicate that, to some extent, a negative attitude toward FMIS users is one of the user problems affecting the effective deployment of FMIS in Tanzanian local government agencies. The negative attitude is largely related to its unreliability during power outages and network outages. However, [Chene and Hodess \(2009\)](#) contend that the Ethiopian case study demonstrated that what matters most in the process is mid-level management's commitment to reform, because changes must eventually be implemented at this level. According to [Rodin-Brown \(2008\)](#), the greatest method to overcome resistance is to market the reforms, with the message delivered via trustworthy national resources. Workshops, seminars, training sessions, a website, conferences, or newsletters are all effective ways to sell.

7) Lack of motivation

A lack of motivation was another area of user issue research. According to the findings, the majority of respondents (50 percent) agreed that a lack of desire is

one of the user-related obstacles influencing effective FMIS adoption. This issue, as well as others, must be addressed. Therefore, for successful implementation, all stakeholders must be engaged and motivated. The findings corroborate [Diamond and Khemani's \(2005\)](#) contention that motivation and support for the choice to install the new FMIS are crucial. Participation, information, and appropriate training can frequently improve this support. Staff dealing with FMIF might be motivated in a variety of ways. Salaries and fringe benefits, for example, as well as solid work plans and timely feedback, can help retain employees.

The descriptive analysis findings were consistent with the chi square analysis findings that users' capacity, commitment, lack of user training, poor attitude toward FMIS, and lack of motivation all contribute significantly to the effective implementation of the financial management information system in Tanzanian local government authorities (significant value from chi square being less than 0.05). The absence of user awareness and capacity was not significant ($p = 0.2$, which is greater than 0.05). Because FMIS is one of their primary financial application tools, numerous system users (primarily from ICT, finance and procurement departments) must be aware of the system.

4.4. Organizational Challenges Affecting Effective Implementation of FMIS

In assessing the organizational issues impacting effective FMIS adoption, 78 percent said yes, 14 percent said no, and 8 percent said they don't know. The following nine areas were tested under the umbrella of organizational challenge: poor organizational arrangement; lack of improved arrangements; poor organizational management; poor legal framework; lack of clear financial policy; lack of proper monitoring and evaluation; development of new organizational culture; coherent legal framework; and lack of clear legal guidance. The results ([Table 4](#)) are as follows:

Table 4. Organizational challenges affecting effective implementation of FMIS.

S/N	Organization challenges	Response towards organization challenges in (%)					Chi-square (p-value)
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
1	Poor organization arrangement	17	36	17	19	11	0.016
2	Lack of improved arrangements	17	33	28	11	11	0.02
3	Poor organization management	19	36	22	14	8	0.005
4	Poor legal framework	17	39	17	14	14	0.004
5	Lack of clearly financial policy	17	42	19	11	11	0.001
6	Lack of proper monitoring and evaluation	17	39	19	14	11	0.005
7	Development of new organization culture	6	17	22	44	11	0.003
8	Coherent legal framework	19	33	17	22	8	*0.202
9	Lack of clear legal guidance	19	36	17	14	14	*0.18

Source: Research data (2018).

1) Poor organizational arrangement

Poor organizational layout was found to be one of the organizational problems affecting the implementation of FMIS in Tanzanian local government bodies, with just 11 percent strongly disagreeing and 19 percent disagreeing. The plan for organizing and managing all of the key stakeholders involved, including the Ministry of Finance and Planning, Po-RALG, Parliament, the Attorney General Office, and development partners, must be clear in terms of implementation and reporting. Reforms must be treated seriously at all levels. The findings are consistent with [Chene and Hodess \(2009\)](#), who claim that an IFMIS implies both efficiency and procedural changes. It entails organizational transformation, which has a significant impact on work processes and the institutional frameworks that control public financial management. Institutional reform, on the other hand, is difficult to achieve and, according to the [International Consortium on Governmental Financial Management \(2008\)](#), requires time, dedication, champions, and courage.

2) Lack of improved arrangement

When asked if better accommodations were available, 17% strongly agreed, 33% agreed, 28% neutral, 11% disagreed, and 11% strongly disagreed. As proven by [Rodin-Brown \(2008\)](#), business process re-engineering is a vital component of any IFMIS reform and necessitates a review of all systems, functional processes, methodologies, rules and regulations, legislation, banking arrangements, and related activities. It will be important to establish new, standardized procedures throughout the government to formalize job descriptions and improve internal and external control arrangements and systems.

3) Poor organizational management

The data found that over 19% of respondents strongly agreed and 36% agreed that poor organizational management was impacting FMIS deployment. Thus, even though the LGAs are equipped with all the necessary FIMS, there must also be effective organizational management at all levels for the financial systems to be implemented smoothly. According to [Chene and Hodess \(2009\)](#), an IFMIS implies both efficiency reforms and changes that change existing procedures. It entails organizational change, which has a significant impact on work processes and institutional frameworks controlling public financial management. Institutional reform, on the other hand, is difficult to achieve and, according to the [International Consortium on Governmental Financial Management \(2008\)](#), requires time, dedication, champions, and courage.

4) Poor legal framework

Furthermore, just 28% of Tanzanians believed that a lack of a legislative framework was one of the obstacles to efficient FMIS implementation in local government agencies. For the success of Tanzania's projects, for example, a clear legal framework governing the overall public finance system must underpin FMIS. For example, in [Diamond and Khemani \(2006\)](#), they decide to purchase a less sophisticated, mid-range commercial package. The study findings support

Chene and Hodess (2009)'s argument that, among other things, there should be clear legal guidance on all institutions' roles and responsibilities in managing, controlling, and monitoring budget execution; authorization, commitment, and release of funds; accounting basis (cash or accrual); reporting requirements; and asset management, public investment, and borrowing, as also evidenced in Rozner (2008).

5) Lack of clear financial policy in the organization

When respondents were asked about the lack of clear financial policy in their organization, the results revealed that one of the problems influencing the efficient implementation of FMIS in local government authorities is a lack of clear financial policy in an organization. This is because the majority of responders (58%) agreed with the assertion. According to Rodin-Brown (2008), business financial policy is a critical component of any IFMIS reform and necessitates a review of all systems, functional processes, methods, rules and regulations, legislation, banking arrangements, and related processes. It will be necessary to establish new, standardized procedures throughout the organization as well as the government to formalize job descriptions and improve arrangements and systems for internal and external control.

6) Lack of proper monitoring and evaluation mechanisms

Results also show a clear agreement that a lack of proper monitoring and evaluation mechanisms is one of the challenges affecting effective implementation of FMIS in local government authorities in Tanzania. As also shown in Rozner (2008), FMIS design should, therefore, be preceded by a detailed functional analysis that underpins current functional processes, procedures, user profiles, and requirements that the new system will support. In Ghana, the design and development of IFMIS were not satisfied because of problems with the reporting functionality. This was because of a lack of clear specifications of the reporting requirements and approval from the government on the design of various reports, as also shown in Diamond and Khemani (2006). According to the Americas' Accountability Anti-Corruption Project (2004), higher functions delegate basic responsibilities to lower level operations. The primary controls are built into the system through decision-making policies and procedures and through monitoring and detecting significant variances. Controls are designed to operate in synchronization with the flow of activity instead of being a barrier that must be circumvented.

7) Development of a new organizational culture

When asked if the formation of a new organizational culture was one of the organizational issues influencing the effective implementation of FMIS in Tanzanian local government authorities, the data revealed that more than half of the respondents disagreed. This demonstrates that the demand for new organizational change is not consistent; it varies depending on the configuration. According to Indeje and Zheng (2010), the introduction of a new information system profoundly changes the way activities are carried out and hence necessitates

a well-managed procedure. This process culminates in the development of a new organizational culture or a shift in how the company functions. In Rwanda, for example, three teams were in charge of developing the IFMIS. Due to a lack of or insufficient coordination among the teams, the IFMIS was incompatible with the system for the Rwanda Revenue Authority designed by [Hove and Wynne \(2010\)](#).

8) A coherent legal framework

In terms of a clear legal framework for FIMS, the data found that while 22% of respondents disagreed, 8 percent strongly disagreed. The findings are related to the fact that the FMIS in the country is a government project supported by all supportive policies and legislation, including the PFMRP. According to [Chene and Hodess \(2009\)](#), the Tanzanian implementation of IFMIS was distinguished by modifying and adopting supporting legislation, which contributed to the system's success. According to the [Accountability Anti-Corruption Project for the Americas \(2004\)](#), when there is a coherent legal and policy framework that explicitly recognizes IFMS as an essential tool for state modernization, IFMS is more likely to be implemented regardless of political, economic, or leadership changes.

9) Lack of clear legal guidance

The findings highlight the need for clear legal advice on dealing with FIMS as one of the issues influencing efficient FMIS implementation in Tanzanian local government bodies. Among other things, there should be clear legal guidance on all institutions' roles and responsibilities in managing, controlling, and monitoring budget execution; authorisation, commitment, and release of funds; accounting basis (cash or accrual); reporting requirements; and asset management, public investment, and borrowing, as demonstrated in [Rozner \(2008\)](#).

The chi-square analysis results revealed that the two issues (coherent legal framework and absence of clear legal guidance) were not significant in comparison to the remaining seven challenges. The findings support the hypotheses that organizational challenges such as arrangement, management, regulatory framework, financial policy, and monitoring and evaluation (M & E) procedures have a significant impact on the effective implementation of the financial management information system in Tanzanian local government authorities. The legal framework and legal guidelines are irrelevant to the efficient implementation of FMIS. This is due to the fact that some government efforts, legal framework, and guidance must be in place prior to implementation.

5. Conclusion and Recommendations

5.1. Conclusion

This study investigates the obstacles to the effective adoption of financial management information systems in Tanzanian local government bodies. According to the majority of respondents, the financial management information system (FMIS) faces numerous technical challenges in its implementation by Tanzanian local government authorities, including a lack of computer accessories, the use

of old computer machines, a lack of constant electrical power, poor computer software security, software failure, and software expiry. Obstacles such as a lack of ability, a lack of commitment, and institutional and technological issues pose a danger to the successful implementation of FMIS.

In terms of user-related challenges, it was ascertained that lack of user capacity, lack of user commitment, poor attitude toward change, lack of user training, poor attitude toward FMIS to users, and lack of user motivation are some of the user-related challenges affecting effective FMIS implementation in Tanzania's local government authorities.

Furthermore, respondents disagreed that one of the issues influencing effective FMIS deployment in Tanzania's local government authorities is a lack of user awareness. Besides that, it was discovered that FMIS in Tanzania's local government authorities faces a number of organizational challenges related to poor organizational arrangements, a lack of improved organizational arrangements, poor organizational management, a poor legal framework, a lack of clear financial policy, a lack of clear legal guidance, and a lack of proper monitoring and evaluation mechanisms, which is one of the organizational challenges affecting effective FMIS implementation. Furthermore, 55 percent believed that one of the organizational issues impacting the implementation of the financial management information system in Tanzania's local government authorities is the development of a new corporate culture and cohesive legislative framework.

Therefore, it is commonly recognised that fully operational financial management information systems help to better governance by delivering real-time financial data that financial and other managers may use to successfully run programs, set budgets, and manage resources. By increasing government openness and accountability, FMIS can also serve as a disincentive to corruption. Technical issues, user challenges, and organizational challenges have been identified as threats to the successful adoption of FMIS in Tanzania's local government authority. When local governments deploy FMIS, it is critical that best practice recommendations be followed.

A capacity-building program, obtaining commitment from all role players, the development of a legal framework, an agenda for effective change management, a strong project management team, a phased approach to implementation, and a well-defined project implementation plan must accompany such a decision. Furthermore, the efficacy of FMIS as a financial management tool is contingent on the ability to finance and maintain essential technology. If either is missing, the system will fail to provide decision makers with valuable and timely information. As a result, Tanzania's Ministry of Finance and Planning should boost the budget for FMIS implementation in order to roll out the program, provide periodic capacity building, hold consultative meetings, and conduct comprehensive M&E exercises. On top of that, as contended in *Mzyece (2006)*, sponsoring e-government programs such as IFMIS should be considered as an investment rather than an expense. Furthermore, as stated in *Isa (2016)*, successful imple-

mentation of the IFMIS system demands political will, honesty, and commitment to overcome the different hurdles outlined in the paper in order to realize the full benefits of the system.

5.2. Recommendations

According to the study findings, the researchers recommend the following to ensure the successful deployment of the financial management information system in Tanzania's local government bodies.

1) Technical challenges

The Tanzania government has to ensure a constant supply of electricity in all district councils; the supply of modern computers with their accessories; and strong computer software security frequently updated for effective implementation of financial management information systems in local government authorities. The findings also revealed that FMIS is centrally controlled by the central government in Dodoma and the district council has no full mandate for the system, such as troubleshooting in case of any kind of network failure. This leads to wastage of time in making communication with the ministry concerned, which is the main controller of the system. It is therefore recommended that the government of Tanzania should delegate system administration to the district council or employ an IT technician dedicated to software and hardware troubleshooting in each district council to avoid idleness during system failure. This is also in line with the [Diamond and Khemani \(2006\)](#) that the importance of commitment by politicians and management is vital to ensure the success of the implementation of FMIS. Experience indicates that the best-designed project will fail without firm commitment from all stakeholders involved, including politicians, as well as senior and middle management. The FMIS software and hardware platforms should be sustainable, using expertise available within the country and, if possible, built on systems already in place.

2) Users' challenges

The Tanzanian government, through the Ministry of Finance and Planning and PO-RALG, should promote users' awareness of the system, create capacity through on-the-job training, and provide staff facilitation and motivation to system users and other stakeholders. The government should also hire professional corporations and experts to help with implementation and change management. According to [Vickland and Nieuwenhuijs \(2005\)](#), an IFMIS entails more than just project implementation; it also entails capacity building planning. A robust training program is therefore critical to the project's success and should be developed as soon as possible. Training is vital for unlocking client preparedness and is the best approach to ensure a system's long-term viability. As proven by the [Americans' Accountability Anti-Corruption Project \(2004\)](#), a sense of ownership among management, coordinating, and technical professionals, as well as national and sub-national officials, decreases possible resistance and generates a critical mass of support for the system.

3) Organizational challenges

Tanzania's government, through the Ministry of Finance and Planning and PO-RALG, and the general public, to ensure good organizational management and proper arrangement in all district councils through a clear legal framework and legal guidance; clear financial policy; and proper monitoring and evaluation mechanisms. Overall, Roy and Tisdell (1998) contended that the feasibility of good governance is dependent on institutional architecture and the economic resources available to ensure governance. Strong project management is required for the successful adoption of FMIS. Furthermore, efforts should be made by policymakers and decision-makers to ensure strong governance practices through transparency, accountability, and integration of activities engaged in FMIS implementation. Furthermore, policymakers and decision-makers should emphasize the need for an effective organizational management strategy. As Chene and Hodess (2009) note, a sufficient project implementation team should be developed, ideally consisting of a project manager, a public finance economist, a certified accountant, a change management or training professional, an IT-system specialist, and a logistics specialist.

4) Areas for further research

Above all, the study has a number of drawbacks, most notably in terms of focus region coverage. Because the Arusha Local Government Authority was employed as a case study in the research, the study findings may not be extrapolated outside Tanzania's Local Government Authorities. This limitation does not reduce the importance of our research in filling the knowledge gap on effective FMIS adoption. However, because the FMIS is being implemented across the country, more research is being recommended to cover a large area and assess the differences in implementation from different local governments, which differ in geographic proximity such as rural and urban areas, the size of the area, and the effectiveness of the Public Financial Management Reform Programme.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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