

Factors Contributing to the Success of Local Government Revenue Collection Information System (LGRCIS) in Local Government Authorities: A Case of Ludewa District Council, Tanzania

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ABSTRACT

The implementation of the government e-payment gateway (GePG) has enabled central government authorities and agencies to enhance their revenue generation. However, the adoption of this technology has presented various issues that may prove difficult for local government authorities (LGAs) to address without the implementation of specific methods and tactics. The objective of this study was to assess the factors that contribute to the effective implementation of Local Government Revenue Collection Information Systems (LGRCIS) in local government authorities (LGAs). The study examined the contribution of technology to the effective adoption of Local Government Revenue Collection Information Systems (LGRCIS) in Local Government Authorities (LGAs), conducted at Ludewa District Council with a sample size of 75 respondents using a cross-sectional research strategy. Specifically, the study sought to examine the contribution of economic factors to the successful implementation of LGRCIS in the LGAs, the contribution of technological factors to the successful implementation of LGRCIS in the LGAs, and the contribution of institutional factors to the successful implementation of LGRCIS in the LGAs. Guided by the Diffusion of Innovations (DOI) theory, the study employed purposive and simple random sampling techniques to select respondents. Primary data was gathered through questionnaires and interviews. The target population included 212 council employees, focussing on departments such as finance, procurement, logistics, and land, along with revenue collection officers and community representatives. Data analysis involved both qualitative and quantitative approaches, using SPSS for descriptive analysis and thematic analysis for interview data. Findings indicated that technological factors significantly influence the successful implementation of LGRCIS, and recommendations included eliminating taxes on revenue collection facilities and providing training programs for revenue officers to enhance technology adoption. Therefore, the study concluded that effective adoption of technological innovation does not occur in a vacuum; there must be effective strategies to address the factors that enhance the adoption of technological innovation. Results from the field indicate that these factors play a significant role in enhancing the adoption of LGRCIS technology within Local Government Authorities (LGAs). Technological factors significantly contribute to enhancing revenue collection capabilities, and revenue collection institutions need to employ innovations like LGRCIS to bolster their ability to collect revenues from various economic sources.

Keywords: Local Government Revenue Collection Information System, Technological Factors, Success Implementation

I. INTRODUCTION

Enhancement of revenue collection is among the key priorities of the government. Many governments in the world improve their revenue collection strategies to avoid debts that threaten the growth of the economy. More importantly, high revenue collection plays a significant role in promoting efficiency in service delivery as well as economic growth in the country (Haji, 2020). Recently, the government has been facing different challenges in revenue collection, such as community resistance, unethical behaviour from the revenue collection officers, and low labour power to implement the revenue collection initiatives (Okifo & Igbunu, 2015). This challenge leads to insufficient funds collected from different sources of revenue (Kishura, 2020). The implementation of the GePG system among the government authorities started back in 2017 and was monitored by the Ministry of Finance and Planning (MOFP). Since its introduction, the Government Electronic Payment Gateway (GePG) has been well implemented in the government authorities, especially ministries and authorities dealing with revenue collection, such as the Tanzania Revenues Authority (TRA) and the Tanzania Ports Authority (TPA). The linkage between the government's online payment systems and computerised banking systems makes GePG most effective for revenue collection among the central government authorities (Bruce, 2012).

Most governments are currently facing serious challenges in their revenue collection performance, the thing that leads to the financial difference between the budget needed to implement and the obtained revenues from different economic development activities. It is always a threat when the governments do not have sufficient funds to run the social-economic development projects as well as cover the budget expectations (Joseph, 2017). The challenges of poor

revenue collection forced the government to shift from the traditional revenue collection methodology to a modern revenue collection system or payment system (Olatunji, 2009).

The modern payment system covers the whole process of initiating the payment transaction and processing the transaction right through to settlement finality (Nassor, 2019). The current payment system introduced by the government is regarded as the most effective online infrastructure that provides the economy with a good opportunity for growth as it allows a high level of revenue collection and enhances its monitoring and evaluation process (Massawa, 2019). Electronic payment, which is currently used by both local and central government institutions, has been designed to help individuals as well as government officials reduce or eliminate the previous revenue collection challenges that were faced by the traditional payment system (Casu & Lazo, 2017).

The global development of electronic money technology has compelled institutions to switch to electronic-based payment systems from analogy or traditional monetary payment methods (Mgonja & Poncian, 2019). Unlike previous decades, where electronic payment innovation was only practiced by private organisations and banking institutions, recently, public organisations saw the opportunity of using an electronic-based payment system as a means of improving revenue collections as well as ensuring effective allocation of resources (Bruce, 2012). The usefulness and effectiveness of the electronic payments system in enhancing the level of revenue collection in the public sector have led to an increase in public institutions installing computerised systems of revenue collection (Abdallah, 2020).

In Tanzania, the increase in public institutions adopting electronic payment systems came as the result of the government's initiatives to improve internet technology through the installation of ICT infrastructure in every public institution (Msenga, 2020). The challenge to the effective adoption of electronic money technology is the hardship of adopting the new technology by the users; some of the users see the technology as unfriendly and time-consuming (Abdallah, 2020). People who are against the electronic payment system believe that the system is not user-friendly; it is too complex to be easily used by the public officers who are responsible for collecting revenues (Mtebe & Sausi, 2021).

The perceived costs of use refer to the perceived unit cost that a consumer believes an action will incur. Most public officers see the new technology of electronic payment systems as more cost-effective and cannot guarantee maximum return compared to the traditional model of revenue collection, which is mostly labour-intensive (Bruce, 2012). Perceived security is the degree to which a technology user thinks that a particular technology application is safer and less vulnerable to security issues than other applications of that technology. Consumer decisions on whether or not to use newly introduced technology in the community are greatly influenced by their perceptions of security (Abdallah, 2020).

1.1 Statement of the Problem

Ludewa District Council, a growing Local Government Authority (LGA) with numerous economic resources, faces significant challenges in transforming these resources into revenue. Despite implementing various bylaws and strategies aimed at enhancing revenue collection, such as outsourcing some revenue collection activities, the council still struggles to bridge the gap between anticipated expenditures and actual revenue collection. To address these issues, the administration of Ludewa District Council has invested in the Local Government Revenue Collection Information System (LGRCIS) (PO-RALG, 2014). While this system has led to a slight increase in revenue collection, it has not achieved the desired effectiveness. Some finance and taxation practitioners believe that the benefits of LGRCIS do not justify the substantial investments made in its implementation.

Despite the technological advancements provided by LGRCIS, several challenges continue to impede its effectiveness. These challenges include technical issues, lack of user training, resistance to change among staff, and inadequate integration with existing systems. Moreover, the Government Electronic Payment Gateway (GePG), successfully implemented by the Central Government, may not be directly applicable to LGAs without significant modifications. The unique context and needs of LGAs require customized strategies for the successful adoption and utilization of such systems. This discrepancy highlights the need for a deeper understanding of the specific factors that affect the performance of electronic payment systems in local government settings.

Existing studies, such as those conducted by Haji (2020), Sausi and Mbelwa (2021), Abdallah (2020), Raphael (2018), Mtebe and Sausi (2021), Joseph (2017), Mgonja and Poncian (2019), Danga et al. (2019), and Msenga (2020), have identified various factors influencing the adoption and effectiveness of electronic payment systems and local government revenue collection. These studies emphasize the importance of tailored strategies that consider the unique challenges faced by LGAs. However, there is a gap in the literature regarding the specific conditions and modifications required for systems like LGRCIS to achieve optimal performance in local government settings. Addressing this gap is crucial for improving revenue collection and ensuring that technological investments yield the expected returns.

1.2 Research Objectives

- i. To examine the technological factors contributing to the effective adoption of LGRCIS in Ludewa District Council.
- ii. To identify the challenges faced in the implementation of LGRCIS in Ludewa District Council.
- i. To evaluate the impact of LGRCIS on revenue collection in Ludewa District Council.

1.3 Research Questions

- ii. What technological factors contribute to the effective adoption of LGRCIS in Ludewa District Council?
- iii. What challenges are faced in the implementation of LGRCIS in Ludewa District Council?
- iv. What is the impact of LGRCIS on revenue collection in Ludewa District Council?

II LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Innovation Diffusion Theory

This study adopts the Innovation Diffusion Theory to understand the adoption and implementation of the Local Government Revenue Collection Information System (LGRCIS). The Innovation Diffusion Theory explains how a new idea, product, service, or technological advancement is embraced by a population, gaining momentum and gradually acquiring a significant number of users. According to the theory, four main drivers play a vital role in the effective implementation of innovation: communication, time, the social system, and regulations (Waiswa & Okello-Obura, 2014). For the LGRCIS system to be effectively implemented among the Local Government Authorities (LGAs), there must be quality innovation of the technology itself. Effective communication channels are essential to provide the community with sufficient awareness regarding the adoption of LGRCIS. Additionally, adequate time allocation is crucial since technology cannot be adopted within a short period, and the social system should be supportive, minimizing resistance from the community's social systems.

The adoption process is not instantaneous as it requires the community to adjust to new ways of doing things. According to Olatunji (2009), adoption starts with perception, and for a new idea to be effectively implemented, the community must have a positive perception towards it. The Innovation Diffusion Theory outlines five categories of adopters that an innovation passes through before it is fully adopted: innovators, early adopters, early majority, late majority, and laggards (Rogers, 2003). Innovators are the first to adopt new technology, seeing opportunities where others see challenges. Early adopters are risk-takers who embrace new technology after its introduction. The early majority waits for the technology to prove useful before adopting it, while the late majority adopts the technology only after being persuaded by social regulations. Laggards resist change and are the last to adopt new technologies, if at all.

Despite the contributions of the Innovation Diffusion Theory, it falls short in explaining why people resist adopting new ideas and does not provide solutions for overcoming such resistance (Kandir & Juanga, 2019). The theory is more effective in explaining the adoption process rather than addressing the prevention of unwanted behaviours in the community. As the LGRCIS system is currently regarded as new technology, its acceptance will take time but will eventually be integrated into the daily operations of LGAs, employees, taxpayers, and other stakeholders.

2.2 Empirical Review

Efficient payment systems are crucial for enhancing revenue collection and resource allocation in developing countries. Sidek (2015) emphasizes that to realize the benefits of adopting electronic payments, sufficient resources and community awareness are essential. Government and regulatory authorities must create a conducive environment for adoption, involving stakeholders, especially from the technology industry, in designing strategies and policies for e-payment adoption.

In India, Parker (2018) found that despite the advantages of electronic payment systems, their implementation is costly. Modern facilities, training programs, and sufficient budget allocation are necessary to support e-payment systems and enhance revenue collection. Similarly, Kandir and Khan (2021) identified challenges hindering the adoption of e-payment systems in rural Pakistan, such as inadequate ICT infrastructure and insufficient budgets. The study suggests that the government should create a supportive environment for e-payment adoption in rural areas by addressing these challenges.

Haji (2020) examined the impact of Zanzibar's e-payment system on tax collection, using the Zanzibar Revenue Board (ZRB) as a case study. The study found a positive association between the rise in revenue collection and online computerized electronic payments. Increased user awareness and simplicity of e-payment technology were identified as factors likely to enhance revenue collection. Sausi and Mbelwa (2021) used the modified Delone and

McLean Information Systems success model to assess user satisfaction with Tanzania's e-payment gateway system (GePG). The study found that perceived usefulness and trust in the system significantly influence user satisfaction, suggesting the need to raise awareness of GePG's benefits.

Abdallah (2020) evaluated factors affecting the adoption of e-government programs in Tanzania, using the President's Office of Regional Administration and Local Government (PO-RALG) Dodoma as a case study. The study found that gender, age, educational attainment, and income level influence e-government system adoption. Increasing internet technology accessibility and ensuring information privacy and confidentiality are crucial for the success of e-government systems. Raphael (2018) studied the perceived usefulness of GePG on revenue collection in Dodoma City, finding that perceived benefits and ease of use are key factors impacting GePG adoption. The study recommends ensuring the stability of computerized revenue collection systems to enhance adoption and effectiveness.

III. METHODOLOGY

3.1 Research Design

The study used a cross-section research strategy, which enables the collection of data from many centre locations with similar characteristics. Through cross-sectional research design, the researcher was in the best position to obtain data from the LGAs community representatives from the 5 Divisional Officers and the council officers dealing with revenue collection.

3.2 Study Population and Sample Size

Ludewa District Council has a population of 137,520 according to the national census 2022. The council office employs 212 people in total, including part-time staff like the tax collection officers as well as divisional officials, ward executive officers, and village executive officers. According to the purpose of the study, respondents from the departments of finance and plans, procurement and logistics, land, revenue collection officers, and community representatives from the five divisions of the Ludewa District Council made up the research population. The ideal sample size for the study for the known population is determined using Robert Slovine's formula. The source of the Slovin formula is;

$$\frac{N}{1+Ne^2}$$

Where: n = Sample size

N = Population size (number of department employees)

e = level of precision

Assuming = a 10 % level of precision was considered and thus the sample size of the study was 75 respondents.

3.3 Sampling Design and Procedure

Purposive sampling techniques and simple random sampling were both used in the research to reduce research bias and collect respondents with the highest quality information. Therefore about 75 respondents were selected. Council Officers from the administrative positions who were the heads of departments, Divisional Officers and Ward Executive Officers were selected through purposive sampling techniques. The researcher made formal interview section requests to the council officers, due to their busiest schedules and the significant information they possessed the researcher obtained their contacts and arranged a time for interview sections with them. Simple random sampling was used in obtaining the non-administrative employees of Ludewa District Council, the non-administrative officers were obtained through a convenience simple random technique whereby questionnaires involved simple questions were provided to the non-administrative officers found at the District Council Office of Ludewa.

3.4 Data and Collection Approaches

To collect information from respondents for a survey or statistical study, a series of research instruments known as questionnaires were used. A total of 69 respondents received questionnaires. Questionnaires were provided to the Divisional Officers, Ward Executive Officers, Revenues Collection Officers, and non-administrative employees of Ludewa District Council working in the departments of Land, Financial Plans and Procurements, and Logistics. Structured interviews were conducted with the 6 Council officers from the administrative positions obtained at departments of the Business department, Financial Plans and Procurements and Logistics of the Ludewa District Council Office. The application of interviews as among the primary data collection tools puts the researcher in the ideal position to get respondents with in-depth ideas regarding factors influencing the adoption of LGRCIS as the mechanism of rising revenues at the LGAs level.

The research reviewed different documents, records and government reports regarding Tanzania's Revenue Policy and Decentralization Policy which makes it mandatory for the LGAs to have their source of revenues. The researcher further reviewed different directories concerning revenue collection at the LGAs as well as revenue collection trends at the LGAs. Data obtained through documentation were linked with the primary data for the aim of enhancing the study's validity.

3.5 Data Analysis

The study used both qualitative and quantitative data analysis approaches depending on the type of data to get a high-quality study conclusion and increase the level of reliability and validity of the study. Descriptive analysis was used in arranging the quantitative data in the categories of frequencies and percentages on the categorized data through the computerized system of SPSS for the aim of establishing a link.

IV. FINDINGS & DISCUSSIONS

4.1.1 Demographic Characteristics

This section demonstrates the social demographic characteristics of the respondents including age, gender, education level and working experience.

Table 1

Demographic Characteristics of the Respondents

Demographic characteristics	Variable	Frequency	Percentage
Age of respondents	18-25	11	14.7%
	26-35	22	29.3%
	36-45	20	26.7%
	46-55	14	18.7%
	56 +	8	10.7%
Gender of the Respondents	Male	46	61.3%
	Female	29	38.7%
The education level of respondents	Primary	4	5.3%
	Secondary	12	16.0%
	Certificate	20	26.7%
	Diploma	24	32.0%
	Bachelor Degree	13	17.3%
	Master's Degree	2	2.7%
Working experience	1-4 years	16	21.3%
	5 - 9 years	26	34.7%
	10 - 14 years	17	22.7%
	15 - 19 years	12	16.0%
	20 years +	4	5.3%
	Total	75	100.0%

Table 1 indicates that the majority of the respondents involved in the study equivalent to 22 (29.3%) were aged between 26-35 years, 20 (26.7%) were aged between 36-45 and 14 (18.7%) were aged between 46 to 55. On the other hand, 8 (10.7%) were aged above 55 years while the remaining 11 (14.7%) were aged between 18 to 25. The results from the field indicate that the research succeeded in finding respondents who were mature enough to understand the concept of LGRCIS and factors for the effective adoption of technological innovations

Table 1 indicates that the researcher succeeded in using both genders in the study, 46 (61.3%) of the total number of respondents were males and 29 (38.7%) of the total number of respondents were females. Field results indicate that there is an uneven number of LGAs officers employed at Ludewa District Council, hence initiatives should be made to improve the number of female employees at the council.

Table 1 indicates that the majority of the respondents equivalent to 24 (32.0%) had an education level diploma, 20 (26.7%) had an education level certificate and 13 (17.3%) had a bachelor's degree. On the other hand, 12 (16.0%) had an education level of a secondary certificate 4 (5.3%) had an education level of a primary certificate and the remaining 2 (2.7%) had an education level of a master. The results from the field indicate that the majority of the



respondents had the required level of education which supports a good understanding of the concept of LGRCIS and factors for the effective adoption of technological innovations.

Table 1 indicates that the majority of the respondents equivalent to 26 (34.7%) have a working experience between 5 to 9 years followed by 17 (22.7%) respondents who had a working experience between 10 and 14 years. On the other hand, 16 (21.3%) respondents had working experience of 1 to 5 years, 12 (16.0%) had working experience of between 15 to 19 years and the remaining 4 (5.3%) had working experience of above 20 years. The results from the field indicate that the majority of the respondents had a significant level of working experience to understand the concept of LGRCIS and factors for the effective adoption of technological innovations.

4.2 Contribution of Technological Factors to the Success Implementation of LGRCIS in the LGAs

An electronic payment system in revenue collection enables LGAs to have a fast-processing system of collecting and channelling the revenues collected to suitable accounts. This section indicates the effectiveness of the technological factors that determine the adoption of LGRCIS among the LGAs.

Table 2

Contribution of Technological Factors to the Success Implementation of LGRCIS in the LGAs

Contribution of technological factors	Very low	Low	Moderate	High	Very high
Easiness of using the LGRCIS	7.1%	24.3%	15.7%	40.0%	12.9%
Security of using the LGRCIS	5.7%	28.6%	25.7%	31.4%	8.6%
Cost and benefits analysis	7.1%	28.6%	24.3%	31.4%	8.6%
Perceived usefulness	8.6%	14.3%	32.9%	34.3%	10.0%
Level of LGRCIS awareness	5.7%	21.4%	22.9%	38.6%	11.4%

Table 2 indicates that the easiness of using the LGRCIS technology plays a significant role in influencing the adoption of LGRCIS among the LGAs, 28 (40.0%) mentioned the easiness of using the technology is having a high influence on the adoption of LGRCIS, 9 (12.9%) mentioned the influence of LGRCIS easiness of use is very high while 11 (15.7%) mentioned the influence level is moderate. On the other hand, 17 (24.7%) mentioned the influence level of easiness of using the LGRCIS technology is low and the remaining 5 (7.1%) mentioned the influence level is very low.

Table 1 indicates that the security and safety of using the LGRCIS technology plays a significant role in influencing the adoption of LGRCIS among the LGAs, 22 (31.4%) mentioned the security and safety of using the LGRCIS having a high influence on the adoption of LGRCIS, 6 (8.6%) mentioned the influence of security and safety of using the LGRCIS is very high while 18 (25.7%) mentioned the influence level is moderate. On the other hand, 20 (28.6%) mentioned the influence level of security and safety of using the LGRCIS technology is low and the remaining 4 (5.7%) mentioned the influence level is very low.

Table 1 indicates that the cost and benefits analysis of using the LGRCIS technology plays a significant role in influencing the adoption of LGRCIS among the LGAs, 22 (31.4%) mentioned cost and benefits analysis of using the LGRCIS is having a high influence on the adoption of LGRCIS, 6 (8.6%) mentioned the influence of security and safety of using the LGRCIS is very high while 17 (24.7%) mentioned that the influence level is moderate. On the other hand, 20 (28.6%) mentioned the influence level of cost and benefits analysis of using the LGRCIS technology is low and the remaining 4 (5.7%) mentioned the influence level is very low.

Table 1 indicates that the perceived usefulness of using the LGRCIS technology plays a significant role in influencing the adoption of LGRCIS among the LGAs. 24 (34.3%) mentioned perceived usefulness of using the LGRCIS has a high influence on the adoption of LGRCIS, 7 (10.0%) mentioned the influence of perceived usefulness of using the LGRCIS is very high while 23 (32.9%) mentioned that the influence level is moderate. On the other hand, 10 (14.3%) mentioned the influence level of perceived usefulness of using the LGRCIS technology is low and the remaining 6 (8.6%) mentioned the influence level is very low.

Table 1 indicates that the level of awareness of using the LGRCIS technology plays a significant role in influencing the adoption of LGRCIS among the LGAs. 27 (38.6%) mentioned consumer level of awareness of using the LGRCIS has a high influence on the adoption of LGRCIS, 8 (11.4%) mentioned the consumer level of awareness of using the LGRCIS is very high while 16 (22.9%) mentioned that the influence level is moderate. On the other hand, 15 (21.4%) mentioned the influence level of consumer-level of awareness of using the LGRCIS technology is low and the remaining 4 (5.7%) mentioned the influence level is very low.

The result from the field indicates that to improve the adoption of LGRCIS responsible authorities should lower the facilities and operational costs as well as improve the internet network and ICT system. During the interview

section with the Ludewa District Council Officer, it was revealed the Council has introduced several initiatives to eradicate the challenges of revenue collection through LGRCIS of which they helped in improving the level of revenue collection through LGRCIS.

“We understand the need to have a sustainable amount of revenues collected from our source thus we have employed the different mechanisms of eradicating the challenge of low revenue collection due to poor application of LGRCIS. The increases in the number of training and capacity building programs for our revenue collection officers shows the determination of the council to eradicate challenges hindering effective adoption of LGRCIS” (Ludewa District Council Officer, 2023).

4.3 Discussions

Results from the field indicate that technological factors play a significant role in enhancing the adoption of LGRCIS among the LGAs. Results from the field have indicated that the majority of respondents believe that PEOU is having a significant impact on the adoption of LGRCIS at Ludewa District Council. Study findings indicated that LGAs Officers prefer operational processes which are easy to adopt and at the same time provide a significant number of advantages. The results from the field have further indicated that the easiness of using LGRCIS is having a direct impact on the increase of revenue collection at Ludewa District Council compared to the previous traditional way of revenue collection.

Perceived Ease of Use is the degree to which a person believes that using a particular system would be free of effort, effort is a finite resource that a person may allocate to the various activities for which he or she is responsible (Goundar, 2021). Results from the field correlate with the thought of Mtebe and Sausi (2021) who mentioned that employees can achieve more when they are armed with the tools they love and are familiar with, end users of the technology are the ones with the best feeling about the satisfaction brought by the friendly technology of performing duties (Mtebe & Sausi, 2021). When the technology can be easily adopted by the employees it guarantees the effectiveness of the technology in bringing positive changes in the institution's operations.

Results from the field indicate that it is costly to adopt LGRCIS as the major system of revenue collection; the municipal council is forced to pay for the different processes involved in the implementation of LGRCIS the thing which demands effective budget allocation. Perceived cost refers to the costs which the consumer of the technology or service incurs when using the particular technology or service concerning the benefits which the consumer may obtain from using the particular service or technology. (Goundar, 2021)

Results from the field correlate with the thoughts of Kambona (2016) who mentioned that responsibility should focus on the positive outcomes which may be delivered by the use of the technological system of revenue collection instead of the negative outcomes. They should be ready to conduct cost and benefits analysis between traditional revenue collection systems and computerized revenue collection systems (Kambona, 2016). The benefits of using technology in revenue collection outshined the negative impacts brought by the adoption of technological systems of revenue collection (Mtebe & Sausi, 2021)

The high pace of technology comes with risks, especially in developing countries which have not implemented innovative security systems to avoid risks associated with daily innovations. If security issues are not well managed by the responsible authorities the technology employed by more technology there is a huge possibility of the technology being misused (Kandir & Juanga, 2019). The result from the field indicated the Ludewa District Council Officers believe that Security Issues associated with the use of LGRCIS if not well managed can hinder the adoption of LGRCIS. The results show that there is a significant correlation between security issues management and the implementation of LGRCIS at the Council.

On the other hand, technological security issues such as leakage of taxpayers' information and online tax information forgery have been affecting the Council's capacity to effectively implement the LGRCIS. Results from the field indicate the management of Ludewa District Council has installed the IT Security Management software to handle all of the security threats which affect the adoption of LGRCIS in revenue collections. IT Security Management is the process which enables financial institutions and other organizations to build the capacity of the management structures and technological facilities to protect the organization's information and other ICT operations against internal and external threats (Goundar, 2021)

Results from the field have indicated that the adoption of LGRCIS is more useful in revenue collection the thing which improves the management of Ludewa District Council's determination to support the implementation of LGRCIS. This is supported by the thought of Braunerhjelm (2010) who mentioned that for the technology to be effectively adopted and accepted by the organization's members it needs to have the capacity to solve the organization's challenges (Braunerhjelm, 2010).

Ludewa District Council has been highly benefiting from the adoption of LGRCIS in revenue collection the thing which eradicated administrative and non-administrative resistance to adopting LGRCIS as the major revenue

collection system. According to Davis (1989), the community cannot be ready to accept and adopt the new technology unless the technology is useful, and comes with opportunities for development and the ability to solve different challenges facing the community.

Findings from the field have indicated that the adoption of LGRCIS has improved the level of revenue collections, lowered administrative costs, and improved monitoring and revenue evaluations. Ludewa District Council has been facing the challenge of high revenue collection day-to-day administrative costs and the persistence of the tax avoidance challenge, LGRCIS has been the solution to these challenges thus its implementation has gained support from both the internal and external stakeholders.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

Effective adoption of technological innovation does not occur in a vacuum; there must be effective strategies to address the factors that enhance the adoption of technological innovations. Results from the field indicate that these factors play a significant role in enhancing the adoption of the LGRCIS technology within the Local Government Authorities (LGAs). Technological factors significantly contribute to enhancing revenue collection capabilities, and revenue collection institutions need to employ innovations like LGRCIS to bolster their ability to collect revenues from various economic sources.

Despite the notable level of LGRCIS adoption among the LGAs, revenue collection through LGRCIS has not met the expected targets. Challenges remain that hinder the process and need to be addressed. One key area of improvement is the high cost associated with the installation and purchase of LGRCIS facilities and systems, which is attributed to the high amount of VAT imposed by the Tanzania Revenue Authority (TRA). Additionally, there is a need for training and capacity-building programs for revenue collection officers, as the level of awareness on how to effectively apply the LGRCIS system remains a significant challenge. Improving the security management of the ICT system used in revenue collection is also crucial, as findings indicate vulnerabilities in the LGRCIS system that allow for document forgery to evade taxes and tariffs in the Ludewa District Council.

5.2 Recommendations

To address the challenges and improve the effectiveness of LGRCIS in enhancing revenue collection, several policy implications need to be considered. Firstly, the removal of taxes on facilities used by government institutions in revenue collection should be prioritized. The high VAT imposed by the TRA on LGRCIS facilities and systems significantly increases the cost of installation and purchase, thereby hindering the widespread adoption and effectiveness of the system.

Furthermore, introducing comprehensive training and capacity-building programs for revenue collection officers is essential. The field results indicate that the lack of awareness and understanding of the LGRCIS system among officers is a major barrier to its effective implementation. Such programs would equip the officers with the necessary skills and knowledge to utilize the system efficiently, thereby enhancing revenue collection processes.

Lastly, there is a need to improve the security management of the ICT system used in revenue collection. The findings suggest that the current system is susceptible to document forgery, which enables individuals to evade taxes and tariffs. Strengthening the security measures within the LGRCIS system would mitigate these risks and ensure the integrity and reliability of revenue collection processes.

Therefore, addressing these policy implications is crucial for overcoming the challenges hindering the effectiveness of LGRCIS in revenue collection among the LGAs. By removing taxes on revenue collection facilities, introducing training and capacity-building programs, and enhancing the security management of the ICT system, the adoption and effectiveness of LGRCIS can be significantly improved.

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