

**AN ASSESSMENT OF ‘INFORMATION, COMMUNICATION, AND TECHNOLOGY’
ADOPTION ON REVENUE COLLECTION FUNCTION IN DISTRICT COUNCILS OF
ZAMBIA: A CASE STUDY OF CHILANGA DISTRICT COUNCIL**

BY

DOMINIC LISULO SINJWALA

**A Dissertation submitted to the University of Zambia in partial fulfilment of the
requirements for the award of the Degree of Master of Business Administration General.**

THE UNIVERSITY OF ZAMBIA

LUSAKA

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DECLARATION

I, Dominic Lisulo Sinjwala, do hereby declare that this work is my original work achieved through personal reading and research. This work has never been submitted to the University of Zambia or any other Universities. All sources of data used and literature on related works previously done by others, used in the production of this Dissertation have been duly acknowledged. If any omission has been made, it is not by choice but by error.

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APPROVAL

This Dissertation by **Dominic Lisulo Sinjwala** is approved as a partial fulfilment of the requirements for the award of the Degree of Master of Business Administration General

Examiner 1	Signature	Date
.....

Examiner 2	Signature	Date
.....

Examiner 3	Signature	Date
.....

Chairperson Board of Examiners	Signature	Date
.....

Supervisor	Signature	Date
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ABSTRACT

Most local governments struggle to effectively mobilize and collect the local revenues needed to effectively deliver economic and social services to citizens. Using the Chilanga District Council (CDC) as a case study, the study's objective was to assess the adoption and use of information and communication technology (ICT) in the revenue collection process, examine current methods in use, understand current revenue collection challenges, and to ascertain whether it is feasible to adopt ICT as a revenue collection enhancement model in district councils in Zambia. The study adopted a survey design and a quantitative descriptive approach. Data collection was carried out using a quantitative method through a questionnaire survey. The Yamane (1967) formula was used to determine a sample size of 402, which consisted of 13 employees and 389 clients of the CDC. The data was analyzed using STATA version 14. The findings showed that: Majority of the clientele (82.3 % [320/389]) manually pay taxes over the counter at the CDC; bank transfers (46.2 % [6/13]) and point-of-sale (38.5 % [5/13]) are the electronic platform currently used to receive payments and clients stated that they prefer an absolute electronic revenue collection mode (92.3 % [12/13]); poor internet connectivity is the major (61.5 % [8/13]) anticipated challenge that the council would face when revenue collection is absolutely electronic, the study further revealed that Tax payer's poor knowledge on use of digital payment platform would be another challenge (30.8 % [4/13]); and majority (84.6 % [11/13]) suggested that adoption of e-payment platform will resolve the current challenges faced in paying taxes such as high transport cost and long distance. The study also revealed other challenges, such as low client awareness of available e-payment models, poor internet access in some areas of the district and non-decentralization of payment points to remote areas of the district. Inferential statistics further revealed that perceived ease of use ($\beta = 0.45$, $p < 0.01$) and perceived usefulness ($\beta = 0.50$, $p < 0.01$) significantly predict ICT adoption in Zambian District Councils' revenue collection, with younger employees ($r = 0.65$, $p < 0.05$) showing a stronger relationship between perceived usefulness and ICT adoption. In conclusion, the adoption and use of ICT in revenue collection process at CDC is still in its infancy. Therefore, to enhance revenue collection, the council should invest more resources in the development and use of cost effective, accessible and user-friendly e-payment platforms as well as raising awareness of the existing e-payment options, and decentralizing payment points in areas where the use of e-payment models is difficult due to poor internet connectivity.

Keywords: Information and Communication Technology, Adoption, Revenue Collection, Chilanga District Council, Zambia.

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DEDICATION

I dedicate all this work to almighty God for his unfailing love, my family members and friends who had to put up with my prolonged absence while I engaged in my pursuit of knowledge as the noblest of all human endeavors.

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LIST OF ACRONYMS

ICT	Information, Communication and Technology
CDC	Chilanga District Council
Council	Chilanga District Council
LG	Local Government
TRA	Theory of Reasoned Action
TAM	Technology Acceptance Model
UTAUT	Unified theory of acceptance and use of technology
CDF	Constituency Development Fund

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.0 Introduction

This study aimed to assess the adoption and use of Information Communication Technology (ICT) as a model for revenue collection enhancement in the district councils in Zambia using the Chilanga District Council as a case study. This chapter provides an overview of the structure of the report. It begins by laying the background of the study on the adoption and use of ICT in revenue collection conducted by other scholars in Chapter 1. The statement of the problem is discussed in this chapter, which then forms the general and specific study objectives and research questions. The significance of the study, the scope of the study, and the definition of key operational terms are also elaborated in this chapter. Chapter 2 presents a literature review of other studies on the topic. Chapter 3 describes the research methodology used to conduct the study as well as how the data was collected and analyzed to generate the research findings. Chapter 4 of the report presents the research findings based on the study objectives. Chapter 5 elaborates on the study findings with the study context and contrasts the findings with the findings from other studies on the topic area. This chapter demonstrated the relevance of the findings to the topic area and addressed the knowledge-operation gap identified in chapters one and two. In chapter 6, key conclusions on the study findings were made, including recommendations for improving revenue collection through the adoption of ICT and suggestion for future studies.

1.1 Background

Local governments (LGs) around the world play a key role in the delivery and provision of public services and infrastructure necessary for social and economic development (Clos, 2015).

To achieve this mandate, adequate financing through effective local tax mobilization and collection (McCluskey et al., 2018) is critical.

In Zambia, the LG Act of 2018 and Rating Act No. 2 of 2019 mandate local authorities to collect revenue in the form of property tax, user fees and charges, and business licenses for the purpose of financing service delivery.

Local authorities are constituted in the Zambian system under Section 3 of the Local Government Act, Cap. 281 of 2019. There are currently 116 councils, including 5 city councils, 17 municipal councils, and 94 district councils, which are the names of local governments (CIgf, 2023). Municipal councils serve suburban areas; city councils are situated in locations with higher economic activity and population densities. District councils are located in rural districts and are generally sparsely populated (Siddle, 2019). Legally, all councils have the same mandates and authority.

Local Government Act No. 19 of 1992 of the laws of Zambia mandates local authorities to deliver both social and economic services to the communities under their jurisdictions. Some of the services offered to residents include solid waste management, the provision of conducive trading spaces, road maintenance, street lighting, development planning, and other services stipulated in Section 61 of the Local Government Act. Therefore, effective collection of its own revenue is a critical determinant of the financial viability of any municipality (Manyaka, 2014).

The Local Government Act of 2018 and Rating Act No. 2 of 2019 give local authorities the legislative mandate to collect their own revenue in the form of levies, local taxes, and other fees and charges for the purpose of providing developmental and socioeconomic services to their respective communities. Local taxes are taxes that consist of property land rates and personal levy. Levies are taxes on economic activities taking place within the Council's jurisdiction, such as business permits, livestock levy, and fish levy. Fees and charges are imposed for the services rendered by a particular council to the residents living within their boundaries. Other sources of revenue for councils include national support (grants), loans, land development funds, donor funding, and the local government equalization fund (Training Manual on Revenue Collection by Councils, 2012).

However, despite having this legislative mandate and several revenue sources, Zambian local authorities like many other municipalities in developing countries face huge challenges in collecting its revenue and financing of day-to-day service provision operations (Chibiliti,

2010). Rebert et al. (2014) and McCluskey et al. (2017) in their study concluded that the use of manual revenue collection systems is one of the primary causes of poor revenue collection in most local governments. Manual revenue collection methods are not only prone to issues like high collection costs, fraud, underpayments, and corruption but can also result in the majority of local authorities' failure to meet revenue collection targets.

Rebert et al. (2014) further stated that inefficient methods of revenue collection, such as the issuance of manual receipts to confirm payment but with no clear records due to dishonest employees issuing fake receipts, deprive Local governments of much-needed funds. Additionally, it is difficult to monitor the district's progress in terms of revenue collection due to manual processes used at the local level (Darison, 2011). Mzumbe (2014) cites several factors that have contributed to the low efficiency in revenue collection in local governments, including corrupt practices, bribery, and tax evasion.

The challenge of failing to adequately collect tax revenues by Local governments in developing countries creates an imbalance of projected revenue collection with actual receipts (Maisiba et al. 2016).

Henry et.al (2018)'s study also re-echoed that revenue collection at both national and local levels is a major challenge and continues to be an obstacle for national and county governments to meet their revenue collection and economic goals.

Ogeatum (2015) claims that ineffective management, political meddling, and corruption are to blame for low revenue collection. Most local governments fall short of their revenue collection targets because much of the collected money is lost due to inadequate data banks, recovery systems, and proper record keeping (Rebert et al., 2014).

Therefore, with the advent of various ICT-enabled payment systems, it is anticipated that councils mostly at the district level should transition from manual processes of revenue collection and adopt models of revenue collection that enhance revenue collection, accountability, and transparency. For example, urban districts would be expected to have transitioned to information, communication, and technology (ICT) models of revenue collection. This is factual as the Zambian Government embarked on migrating to electronic governance, and it is now possible for individuals, clients, and public and private institutions to pay bills ranging from electricity, water,

insurance, transport, company registration, and other government taxes via mobile phone platforms through mobile service providers such as Airtel, MTN, Zamtelkwacha, and other electronic payment platforms. According to Bongoko and Ong'iyoy (2018), the effects of automation (ICT) on revenue collection contribute to increased citizen compliance, accurate, timely and controlled revenue collection. ICT improves revenue collection by close to two-thirds through use of various ICT-based e-payment services in developing countries (Kibaara, 2018). The use of an ICT-based revenue collection system can be a tool that provides a cashless payment environment through which municipal taxes, fees, and other charges and levies can be paid via mobile money, direct bank deposits, and e-transfers (McCluskey et al., 2018).

1.2 Statement of the Problem

Zambian Local Authorities have continued to face challenges in collecting their own revenue needed for effective social and economic service delivery. The Local Government Act No.2 of 2016 and Rating Act no 2 of 2019 mandates Local Authorities to raise their funds through the collection of taxes/rates, levies, and other fees, and charges to finance public service provision to the communities. However, despite having this authority and numerous streams of revenue in the form of property tax, ground rent, Billboards, markets levy, business licenses and other fees and charges, the majority of local authorities in Zambia have been unable to effectively mobilize and collect their own revenue. This mainly due to poor revenue collection systems which present problems such as high collection costs, delayed payment and low compliance (McCluskey et al., 2018). Poor collection of own revenue by most Local Authorities has led to problems such as the inability to adequately fund the public service provision, pay salaries and other statutory obligations for employees on time (Mushimbwa,2020) and over-dependence on central government equalization fund and other grants such as Constituency Development Fund(CDF).

If this research is not conducted to determine how Zambian Local Authorities can enhance the collection of revenue by implementing more economical, efficient, transparent, and effective methods, Councils will continue to experience poor revenue collection, poor service delivery and remain financially dependent on the central government.

The study, therefore, aimed at establishing whether Information and Communication Technology (ICT) has been embraced to enhance revenue collection in Zambian District Councils using the Chilanga district council as a case study.

1.3 Aim of the Study

The aim of this study is:

- To assess ICT adoption on revenue collection function at Chilanga Town Council.

1.3.1 Study objectives

1.3.1.1 To establish current ways of revenue collection

1.3.1.2 To establish the extent to which ICT model has been adopted in revenue collection

1.3.1.3 To identify existing challenges faced in revenue collection

1.3.1.4 To determine the feasibility of enhancing the adoption ICT model for revenue collection

1.3.2 Study questions

1.3.2.1 What are the current ways of revenue collection?

1.3.2.2 What is the extent to which the ICT model has been adopted in revenue collection?

1.3.2.3 What are the existing challenges faced in revenue collection?

1.3.2.4 What is the feasibility of enhancing the adoption of the ICT model for revenue collection?

1.4 Significance of the study

The findings of the study are relevant to policymakers in Local Authorities as they will be able to use all or some of the study recommendations to enhance management and collection of revenue. The study findings will show whether ICT has been adopted in the management of revenue collection in District Councils in order to enhance the collection in a cost-effective way and whether the community members are using ICT to pay Council Taxes, fees and charges. The study findings will also add to the existing body of knowledge on the level and influence of ICT on revenue collection efficiency for Local Authorities in Zambia, and other developing countries in the region.

1.5 Scope and location of study

Assessment of ICT adoption in Zambian District Council processes for revenue collection was the study's main focus. However, due to time limitations, the study's focus was only on Chilanga District Council, which was chosen as a case study. The study examined the ICT adoption and use in revenue collection functions, as well as the challenges associated with current methods of revenue collection. It involved examining how taxpayers currently view and pay for council fees and charges.

1.6 Definition of Key Terms of Operation

Local Government: Local governments are called councils (Clgf, 2023). They are district administrative organizations with a selected devolved mandate by the central government to provide administrative services and infrastructure for social and economic development to residents within its jurisdiction.

Revenue collection: is the act of collecting finances for the residents of a district as provided for in the under the Act of Local Government of 2018.

ICT model: Are the means of using electronic and internet-based processes of making payments or financial transactions, and correspondences between the Local Authorities and its constituencies.

Manual model: This is the use of traditional means or paper-based system to make payments or collect revenue or make financial transactions between the Local Authorities and its community.

1.7 Organization of the report

The report is outlined using six chapters. These consisted of chapter one which is the introduction and background on the use of ICT to collect revenue by Local Authority, and it is under this chapter the statement of the problem, study objectives, study questions, significance of the study, scope of the study, and definition of key operational terms and organization of the dissertation were presented including a chapter summary. In chapter two, a discourse on the topic area was carried out to identify the gap that informed this study. Under this chapter, the review was done using peer-reviewed articles and other published documents by governments and organizations on revenue collection using various models.

Chapter three describes how the data was generated. The data generation was done using the research methodology which consisted of research design, research approach, population and sampling, data collection, analysis, and ethical consideration among them and chapter summary. In chapter four the findings of the study were presented by the study objectives.

Chapter Five discussed the study findings with the study context and contrasted the findings with other findings from other studies on the topic area. This chapter demonstrated the relevance of the findings to the topic area by addressing the knowledge-operation gap identified in chapter one and two. In chapter six, key conclusions on the study findings were made and this included the recommendations for improving revenue collection through the adoption of ICT as well as suggested recommendations for future studies.

1.8 Chapter summary

This chapter introduced the topic area and the background of the study. The key sections of the chapter consisted of an introduction, background, statement of the problem, objectives, significance of the study, scope of the study, definition of key operational terms, outline of the report, and chapter summary. The next chapter is the literature review.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The literature review chapter presents and analyses general, empirical and theoretical work done by other scholars on ICT adoption in revenue collection and its effect on financial institutions, public Institutions and Local Authorities. The chapter also provides the gap analysis and conceptualizes the use of ICT in line with the theoretical framework.

2.1 Information and Communication Technology (ICT)

Information Communication Technology (ICT) is described as a set of various Technologies that capture, transmit and display data and information electronically and include all devices, applications, and networking elements that allow organizations as well as people to connect in the digital world (Nanda and Randhawa, 2019). According to <https://www.igi-global.com>, ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and as well as the various services and applications associated with them. Olatokun (2009) in his study defined Information and Communication Technology (ICT) as technologies such as desktop and laptop computers, software, peripherals, and connections to the Internet that are intended to fulfill information processing and communications functions. ICT is a technology used to support information gathering, processing, tabulation and presentation in a meaningful form (Mugambi, 2019).

According to Olatungi and Ayodele (2017), Information technologies are tools, devices, and resources used to communicate, create, manage, and share information. They include hardware (computers, modems, and mobile phones), software (computer programs, mobile phone applications), networks (wireless communications, internet) and used to collect, processing, store and transmitting relevant information to support the management operations in any organizations.

2.2 Revenue Collection

Revenue collection according to Maina et al. (2017) refers to a government agency's action of collecting outstanding financial obligations from the public or members of the public for fines, taxes or any other fees (Campbell, 2019). Revenue collection is also defined as the general collection of revenue for debts owed by persons or businesses by the government (Campbell, 2019). Revenue collection can further be referred to as the process or the act of formulating, designing, recording and presenting all amounts collected from various sources of the government internal and external(Mugambi,2019)

2.3 Revenue

Revenue is the state's income from which public expenses are met. It is the income generated from the sale of goods and services associated with the main operations of an organization before any cost or expenses are deducted (Mushimbwa, 2020). Mushi (2018) described revenue as inflows of assets received for products or services provided to customers.

2.4 Sources of council revenue

There are many sources through which local authorities raise revenue to finance their operations. The sources may be categorized as the council's own, government or donor support, loans or borrowing (GRZ, 2012).

2.5 Council own revenue

Own revenue sources are traditional sources of revenue that each Council collects and these include local taxes/rates, levies, fees and charges (GRZ, 2012).

2.5.1 Levies

Levies are taxes on economic activities taking place within council jurisdiction. Levies are imposed through council by laws, in accordance with section 69 (1) of the LGA Cap 281.

2.5.2 Business licenses or license fees

Business licenses or license fees are a levy collectible by any local authority on those conducting business in the district. This is accordance to the Local Government Act (Business Levy

Regulations, 2011), which states that local authorities are empowered to collect license fees for any type of business operated in their area.

2.5.3 Fees and charges

According to section 70 (1) of the LGA Cap 281 of the Laws of Zambia, Fees and charges are imposed for the services rendered by the council, to the residents living within their boundaries. While some urban Councils may collect fees and charges from water charges, market fees, bus station fees the case may not be the same for rural Councils who in most cases may only collect fish levies, cattle levies, grain levy. Therefore, fees and charges collected by Councils vary depending on the economic activities and setup of the District.

2.5.4 Local Taxes

A local tax is one that a city, municipality, or district council imposes and collects to pay for government services like road maintenance. Local taxes include personal levy and property tax (rates).

2.5.5 Property Rates

A property tax or rate is a local tax levied at a percentage “rate” upon the annual value of a ratable property (Mushimbwa, 2020). It is an annual tax imposed on real property usually by reference to an ad valorem tax base. Therefore, the tax is calculated according to the value of the property. Included are all tangible real estate properties i.e. houses, office buildings and other properties rented or leased out to others (Kaputula, 2018). Rates form a substantial portion of the revenue that support most councils especially those in the urban set-up (Mushimbwa, 2020).

2.5.6 Personal Levy

A personal Levy is a form of local tax collected by local authorities (Personal Levy ACT Chapter 329). It is levied on individuals who are earning some form of income in a given local authority area. It is calculated as a fixed sum and is payable annually in two equal installments during March and June (Mushimbwa, 2020).

2.5.7 Alternative revenue sources

These are non-traditional sources of revenue receivable to Councils such as National support in form of Local Government equalization funds, loans, land development funds, donor funding, etc (GRZ, 2012).

2.6 Current ways of local revenue collection at Chilanga District Council (CDC)

Chilanga District Council currently has three methods of collecting its local revenue. The First method is through revenue collectors (Council cashiers) who conduct physical inspections at various business premises, valued properties and markets to ascertain whether property tax, fees and charges are paid. In situations where payments are not made, cashiers collect revenue and issue manual receipts as proof of payment. The second method is through customers visiting the Council revenue offices, making payment and walking away with a computer system-generated receipt or Point of sale receipt. Third is through direct bank deposit into the Council revenue accounts.

2.7 Empirical Review

The review provides empirical evidence on the adoption of ICT in revenue collection by other scholars. The section has a sub-section on gap analysis based on the review of evidence, theoretical framework, and conceptual framework.

2.7.1 ICT adoption in Revenue Collection

Studies on the use of ICT in revenue collection has been conducted and evaluated by various scholars. In West Africa, Olatunji and Ayodele (2017) carried out a study whose aim was to examine the impact of information technology on tax administration in south-West Nigeria. The findings concluded that due to the implementation of information technology, the level of productivity in tax collection and administration was enhanced.

In East Africa, McCluskey et al. (2017) did a study in Tanzania whose findings indicated that the use of ICT through an integrated Local Government Revenue Collection Information System (LGRCIS) in revenue collection brought benefits such as improved local government revenue collection, improved revenue administration, improved efficiency and transparency over paper-based system. It also improved taxpayer compliance. Online payment technology through LGRCIS not only led to improved taxpayer compliance but also resulted in reduced cost of revenue

collection and opportunities for corruption, bribery and extortion. The use of ICT provided taxpayers with a range of e-services and e-payment options that make the process of paying taxes or fees faster and easier. In Tanzania Mushi(2018) did a study whose aim was to assess the effectiveness of ICT towards government revenue collection and the results of the analysis reviewed that the use of ICT did enhance revenue collection and that monitoring of collections was real-time.

A study by Kabaara, (2018) on how the adoption of ICT tools such as mobile phone technology and e-wallets influences revenue collection processes, reviewed that there was a positive influence on the revenue collection process by providing a platform that makes the process of paying taxes and fees simpler, faster and easier thus eliminating the complexities of handling cash. The study further asserts that mobile money payment service did cut down the levels of corruption among staff and eliminated fraud by brokers at City Hall. It also indicated that the adoption of Technology by the Rwanda Revenue Authority made the Authority register 100% in gross revenue mobilization while Kenya Revenue Authority registered 90%.

Another study in Kenya by Gituru (2017) revealed that the automated system impacted positively on revenue collection at the Authority. There was an increased rate in revenue collection after the implementation of the Simba system. These findings echoed Henry et al. (2018) study findings which reported that automation of revenue collection contributed to controlled, accurate and timely recording of revenue.

A study in Kenya by Otieno et al. (2013) looked at the effect of Information Systems on Revenue collection by Local Authorities in Homa Bay County involving 2,007 individuals through a structured Cross-Sectional design. The study result found that the information technology systems helped the Council to raise its revenue collection up to 75.3%. The study found a significant relationship between Information Systems with both efficiency and effectiveness in revenue collection. It further concluded that the use of Technology resulted in the timely collection of revenue, enhanced internal controls, and management integrity.

Locally, Mukuwa and Phiri (2020) in Zambia did a study that investigated the effects of electronic services on revenue collection and tax compliance among Small and Medium Enterprises (SMEs) in urban Zambia and through the descriptive analysis process, the results revealed that there has

been a significant increase in revenue collection and tax compliance among SMEs since the introduction of these e-services.

Several other studies in Zambia have been undertaken on the use of technology to make payments and financial transactions. Soneka and Phiri, (2019) recently conducted a study titled “A Model for Improving E-Tax Systems Adoption in Rural Zambia Based on the Technology Acceptance Model”. It was a Survey of 100 respondents that were selected purposively in Solwezi. The results showed that E-tax system in Zambia is useful, easy to use and also secure because the majority of the taxpayers filed their returns and paid taxes online. However, few taxpayers still feel e-tax is not useful, easy to use and secure. This implies that there is a need for more awareness on taxpayer education to bring everyone on board.

Sakala and Phiri (2019) in a study titled “Factors Affecting Adoption and Use of Mobile Banking Services in Zambia Based on TAM Model” based on Survey design among 384 respondents found a significant positive relationship between perceived ease of use, perceived usefulness, user attitude, external variables, user intention and system use. The regression results further showed that the independent variables in the TAM model, perceived ease of use, perceived usefulness, external factors, user attitude and user intention account for 47% of the variance in the factors that determine the use of electronic banking technologies such as mobile banking. The study recommended that commercial banks and the providers of mobile banking services need to improve the perceived ease of use, perceived usefulness, external factors; and promote positive user attitude and user intention. This would result in improved adoption and use of mobile banking services. They should also provide information on how to access and use these services.

Furthermore, Kademaunga and Phiri (2019) researched “Factors Affecting Successful Implementation of Electronic Procurement in Government Institutions Based on the Technology Acceptance Mode” comprising 100 respondents in a Survey. The study findings revealed that perceived ease of use and intention to use were positive. This implies that the personnel in most government institutions were ready to embrace electronic procurement implementation reforms largely due to the ease of use and usefulness of the electronic system. However, the study revealed that not much was being done by top management in respective institutions regarding the implementation of electronic procurement.

Another study on ICT and finances was conducted using the Theory of Reasoned Action (TRA) model. A study titled “Adoption of Internet Banking Services by Corporate Customers for Forex Transactions Based on the TRA Model” was done by Lishomwa and Phiri (2020). There were 132 respondents who participated in the Survey within the FNB Industrial Branch. Findings established that the key factors influencing Internet banking were performance expectancy, control factors, social influence and behavioral intention. Social influence would be a stronger factor leading to adoption of Internet banking for Forex transactions concluded the study.

Inquiries on financial technology adoption have continued to be conducted and Iiuba and Phiri (2021) were fascinated with the transition from traditional to electronic model adoption. In a study titled “The Financial Technology Evolution and Its Effect on Traditional Banking in Africa: A Case of Zambia”. The results showed a strong positive correlation of 0.450 between relative advantage and adoption. Further, the study found a strong positive correlation of 0.621 between Compatibility and Adoption. The study proposes a revised model that shows factors affecting the adoption of an innovation that might help banks.

Even in marketing as it involves handling finances, the Technology Acceptance Model was used by Mooya and Phiri (2021) in a study titled “Factors Hindering the Adoption of E-Marketing among Cable Manufacturers in Zambia, Based on Technology Acceptance Model (TAM)”. It involved 115 respondents in a survey design and the results demonstrated that frequent use of the internet influences on perceived ease of use of technology. Internet knowledge influences on the perceived security of e-marketing. It was therefore, concluded that the level of education does not influence perceived security of e-marketing.

Another study that aimed to assess the role of Information Communication Technology in enhancing property tax revenue in Africa was done by (McCluskey, et al., 2018) and the findings of the research were that ICT provides the opportunity for city councils to adopt a cashless payment system built around e-payments.

2.8 Gap analysis

Information Communication technology adoption in revenue collection has been researched by various scholars and the findings of these studies have immensely contributed to the body of existing knowledge and understanding of how the advent of ICT is contributing to the

improvement of revenue collection administration and service delivery for both private and government Institutions. A study by Kibaara (2018) on influences of Information Communication Technology(ICT) adoption on the successful revenue collection process concluded that mobile phone technology, cloud computing, e-wallet and e-governance had significantly increased security and success of the revenue collection process as well as ease access to conducting online payments. A study by McCluskey and Huang (2019) on the role of ICT in property tax administration lessons from Tanzania indicate that the utilization of modern information communication technology led to improved revenue administration, efficiency and transparency over paper-based and reduced opportunities for corruption. In Kenya, a study by Henry et al.(2018) on the efficiency of automated revenue collection in Nakuru county established that automation of revenue systems did not only enhance effective revenue collection but also led to improved accuracy in revenue collection and timely recording of revenue.

However, from the above reviewed studies, not much has been mentioned on the extent of ICT adoption in the revenue collection process in Zambian district councils which this researcher was seeking to explore further. Furthermore, despite several studies in Zambia conducted on TAM in financial transactions none had been carried out to assess the level of ICT adoption and usage on revenue collection in district councils, particularly at District Councils such as Chilanga. Therefore, this study intended to assess the level of ICT adoption in the revenue collection processes at Chilanga District Council.

2.9 Theoretical literature review

The study is underpinned by the TAM theory. However, the proxy theory Unified Theory of Acceptance and use of Technology was also reviewed, and the TRA theory was also reviewed based on the Unified Theory of Acceptance and use of Technology. The TAM was selected because it suits the study as the study is based on experiences and perception which make the TAM appropriate within its perceived concepts. The section also described the conceptual framework based on the study objectives and TAM (figure 2.1).

2.9.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (Davis, 1989) has been one of the most influential models of technology acceptance. The model has two primary factors that influence an individual's intention

to use new technology namely perceived ease of use and perceived usefulness (Charness and Boot 2016). The model has two theoretical constructs which are fundamental determinants of system use and these are perceived usefulness and perceived ease of use. Perceived usefulness is “the degree to which a person believes that using a particular system would enhance his or her job performance”, while “perceived ease of use is “the degree to which a person believes that using a particular system would be free of effort” (Davis, 1989). Venkatesh and Davis (2000) replicated Davis’ (1989) study and upgraded the theory by referring to extension as TAM2, which explains perceived usefulness and usage intentions with the help of social influence and cognitive instrumental processes, and Adams et al. (1992) replicated Davis’ (1989) study. While TAM theory has been observed to pay limited attention to organizational and other social factors (Korpelainen, 2011), it provides managerial guidelines to encourage ICT adoption (Davis et al. 1989) and the importance of studying the attitudes of employees, because they influence organizational decision making about the acquisition of ICT infrastructure. This theory is relevant to the study as it is a theory specifically developed for ICT implementation and adoption research. It fits well with this study in assessing the adoption level of ICT in revenue collection and its usefulness in Zambian District Councils.

2.9.2 Unified Theory of Acceptance and use of Technology (UTAUT)

A Unified theory of acceptance and use of technology (UTAUT) is a technology acceptance model developed by Venkatesh et al. (2003) in response to a wide variety of competing Information system models and theories (Williams et al., 2015). According to (Korpelainen, 2011) UTAUT was developed by Venkatesh et al.(2003) by reviewing eight models which explain ICT usage, namely Theory of reasoned action (TRA), the Technology Acceptance Model(TAM), the motivational model, the Theory of Planned Behaviour(TPB), a model combining TAM and TPB, the model of PC utilization, Diffusion Off Innovation(DOI), and the social cognitive theory.

The purpose of the model is to explain determinants of a user’s intentions to use ICT which is in turn influenced by performance expectancy, effort expectancy, social influence and facilitating conditions while gender, age, experience and voluntariness act as moderators (Korpelainen, 2011).

The four key factors of this theory which are performance expectancy, effort expectancy, social influence and facilitation make it relevant for this study which seeks to explore the level and impact

of ICT adoption on revenue collection efficiency in Zambian Local Authorities. For example, the performance expectancy factor which looks at perceived usefulness, intrinsic and extrinsic motivation, job fit, relative advantage, and outcome expectations of the Information Technology (Onaolapo & Oyewole, 2018) helps the revenue collection managers for a particular Council to understand the degree to which adopting ICT in the revenue collection process can help attain improved revenue collection. Effort expectancy is another construct of the UTAUT model that is relevant to the study for it can be used to measure the level of ease of use associated with the use of information technology in revenue collection process of Local Authorities. Furthermore, facilitating conditions helps to determine whether Zambian Local Authorities have the technical infrastructure required for the adoption and use of ICT in the revenue collection function of Councils.

2.10 Conceptual Framework

A conceptual framework is a concise description of the phenomenon under study accompanied by a graphical or visual depiction of the major variables of the study (Mugenda, 2008). It is used to outline possible courses of action or to present a preferred approach to an idea or thought. In this study, the use of TAM to attain the study objectives and to provide responses to the study questions was used.

2.11 Interaction of Variables

Figure 2.1 shows a linear relationship between the independent variables and the dependent variable. The relationship is the exertion of influence of the independent variables on the dependent. This illustration is based on the TAM theory that the study is underpinned. In the independent variables, the perceived usefulness concept of the TAM is informed by the two study objectives which are current challenges faced affecting revenue collection (dependent variable) and the extent of ICT model adoption on revenue collection. It is a similar pattern to other independent variables. It is anticipated that the adoption of the ICT model would reduce or curb the current challenges faced in revenue collection. However, perceived usefulness, ease of use and attitude of use are assessed as the ICT model is envisioned to be adopted. This makes this exploration a formative study as opposed to a baseline. It therefore, lays a foundation for evaluation studies such as baseline, and others.

Independent Variables

Dependent Variables

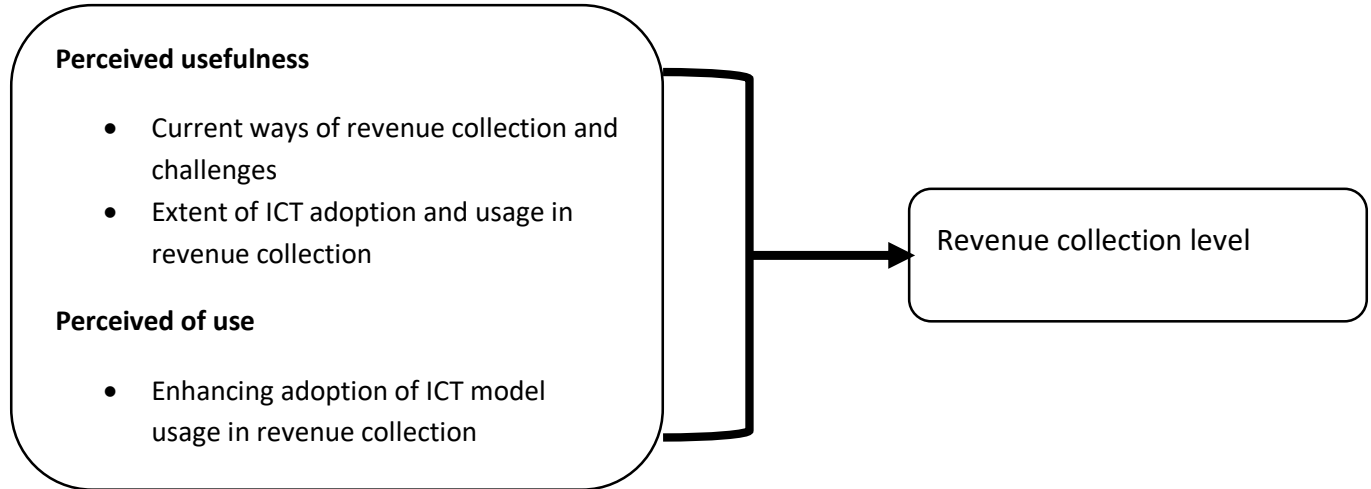


Figure 2:1 The Conceptual Framework on TAM for ICT Adoption of Revenue Collection as used in the study

2.12 Chapter summary

The chapter presented a review of the literature, empirical evidence and theoretical review where two theories were adopted being the Unified theory of acceptance and use of technology (UTAUT) and the Technology Acceptance Model (Davis, 1989). The key factors that are highlighted in the literature review are the benefits of ICT adoption and usage in revenue collection and how use of technology has helped enhance the collection and curb pilferage of the much needed revenue for Local Authorities. Although various studies have been done in other developed and developing countries on ICT adoption in revenue collection and administration, not much is known about the level of ICT adoption and usage in revenue collection by Zambia district councils. Due to limited information on this topic, the study intended to seal the gap by reviewing the level of ICT adoption and usage in revenue collection in District Councils using Chilanga District as a case study. The next chapter is the research methodology.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research methods that were used for the study. The chapter is structured as follows: Research design, research approach, study population and sample, population description, data collection methods, and data analysis, and ethical considerations.

3.1 Research Design

According to Tustin *et al.* (2005), research design articulates what data is required, what methods are going to be used to collect and analyse data and how this is going to answer the research questions.

This study used a Survey design. A Survey design was found to be appropriate for this study because the current situation of ICT adoption in revenue collection was depicted in a short period, which was cost-effective. According to McCombs, (2020) Survey designs aim to describe a current situation and how a population relates to it (Figure 3.1).

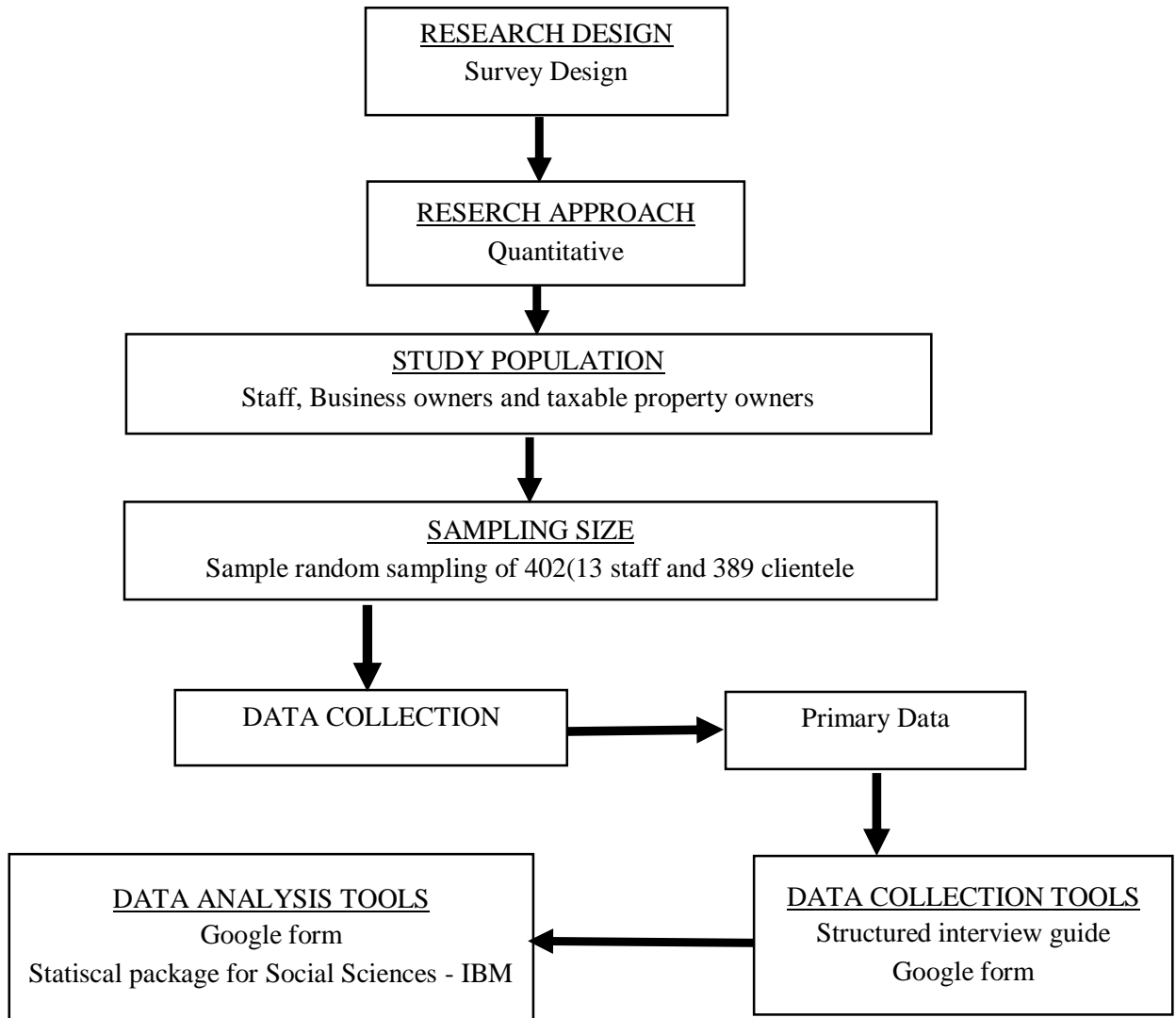


Figure 3:1 Research Methodology Tree

3.2 Research Approach

The study used a quantitative descriptive approach. The study collected population-level data so a quantitative approach was found to be suitable for numerical data. The analysis level of the data was descriptive which fits well with the Survey design (Kothari, 2009).

3.3 Target Population

The target population is described by Borg and Gall (1989) as a universal set of elements which the study population would be drawn from. In social settings, the elements are people. In this case, the targeted population for the study were 389 residents of Chilanga who pay property tax and business licenses and other fees and charges to the district council as well as 13 finance and revenue collection staff at the council.

3.3.1 Sample Size Determination and Sampling Technique

A sample is a section of the part that represents the target population as described by Saunders *et al.* (2009). The study used Yamane (1967) formula to calculate the sample size. The formula is indicated below:

The formula is denoted as indicated below:

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

Equation 3.1: Taro Yamane Formula

Source: Saunders *et al.* (2009)

Where;

n = sample size

e = level of error = 0.05

N = population size = 402 (target population which is the staff, business owners and taxable property owners in Chilanga District Council)

The staff were selected using non-probability sampling technique called purposive sampling because the researcher's judgment focussed only on staff members who handle revenue collections to take part in the study. The customers were selected using systematic sampling which is a probability technique. The interval was calculated by dividing the target population by the sample size (Saunders *et al.* 2009). The properties were selected using the interval to request target population members to respond to the study questions.

3.4 Data Collection Instrument and Procedure

Semi-structured interview guides with both closed- and open-ended questions were used as methods for data collection. The semi-structured interview guide was chosen because it is able to gather both population level and in-depth data, it is simpler and efficient since mostly come with standardized questions. Semi-Structured questionnaire was found to be most appropriate because it allows collection of both subjective and objective data in a large sample of the study population in order to obtain results that are statistically significant, especially when resources are limited and protection of the privacy of the participants is assured (Leung, 2001). The interview guide was designed according to the study objectives. Implying that, the list of questions aimed to attain the set objectives (Saunders et al. 2009). According to Mugenda and Mugenda (2003) questionnaires are commonly used to obtain important information about a population under study. The interview guide for the staff was self-administered while for the customers was led by a trained research assistant. This helped to cater for those that are illiterate.

3.5 Data Collection Type

The study collected primary data. Primary data was collected from respondents using self and research assistant administered interview guides using Google Forms. The data reflects the objectives based on the TAM theory using the concepts perceived usefulness, perceived ease of use and attitude. However, social, economic and demographic data was collected too. Secondary data was based on literature review of published articles and reports.

3.5.1 Internal data validity and reliability

The interview schedules were standardized to ensure uniformity of data collection to minimize mis-measurement of the study objectives. The instruments were pretested for precision and consistency. At least 30 respondents were required for pretesting because it is the appropriate sample to check for patterns that may indicate bias in data collection. This approach ensured that the findings were generalized for external validity and reliability (Saunders et al. 2009).

3.6 Data analysis and presentation

According to Kothari (2009), data analysis is the process of data clean-up and organizing the raw data collected from the field for ease of presentation, inference and decision making. Google form ensures that all the questions are answered, such that no question or item can be left unanswered. The data from Google Platform were downloaded as an Excel Spreadsheet. Data was entered on

an Excel spreadsheet and it was checked for any errors and omissions then coded and entered into the Statistical Package for Social Sciences (SPSS) which generates descriptive statistics (Frequencies, percentages) and inferential statistics using Chi-Square test of association and differences were used. The threshold of significance was 0.05 as stated in the Taro Yamane formula.

3.7 Ethical consideration

The research proposal was subjected to ethical review at the Directorate of Research and Graduate Studies. However, permission to conduct the study in the Chilanga district was sought from the District Council Secretary and other key stakeholders. Potential study respondents were provided with full information about the study, its purpose, the benefits and risks of taking part. However, taking part in this study had no physical or social harm except the loss of time when answering the questionnaires. The study did not compensate for the loss of time and energy. However, the respondents were asked to volunteer based on their goodwill and were availed the autonomy to continue or discontinue taking part in the study when they wished to. Their identities were concealed as no identifiers such as contact details were collected.

3.8 Chapter summary

This chapter presented a step-by-step operation on how the study was conducted to generate the evidence presented in the next chapter. The research design approach was presented which was a survey and quantitative. The sampling formula and technique were also described. Data analysis and ethical considerations were stated in this chapter. The next chapter is the presentation of the key study findings.

CHAPTER 4

PRESENTATION OF STUDY FINDINGS

4.0 Introduction

In chapter three, the procedure for the implementation of the study was provided. This chapter shows what was obtained after the application of the procedures. The findings are presented under three tables with concise descriptions of the salient findings while in the charts are the key findings responding to the study objectives. The first section of the chapter is the description of the characteristics of study respondents, and the rest are four sections aligned with the study objectives and questions. The chapter ends with a summary.

4.1 Characteristics of Study Respondents

There were 13 Chilanga District Council Staff that took part in the study, of these the majority; 61.5 % (8/13) were males, 58.5 % (5/13) aged 35-39 years old, 30.8 % (3/13) held certificate and bachelor's degree levels of qualification, and 46.2 % (6/13) were revenue collectors. The Chilanga District Council clientele that took part in the study were 389, and the majority were males (53.5 % [208/389]); aged 35-39 years old (22.1% [86/389]); attained certificate level of education qualification (42.4 % [165/389]) and 47.8 % (186/389) are self-employed as shown in (Table 4.1).

4.1.1 To establish current ways of revenue collection

According to the Chilanga District Council staff, Table 4.2 and Table 4.1, both manual and electronic/ICT are the mode of revenue collection used (92.3 % [12/13]). Whereas the majority of the clientele (82.3 % [320/389]) reported that they pay taxes over the counter at the Chilanga District Council (Figure 4.2 and Table 4.1).

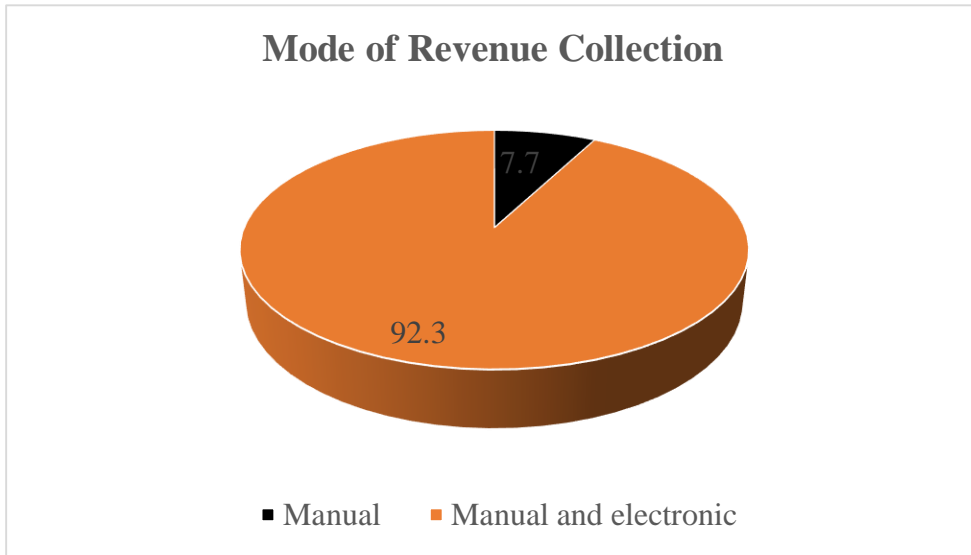


Figure 4:1 Mode of Revenue Collection

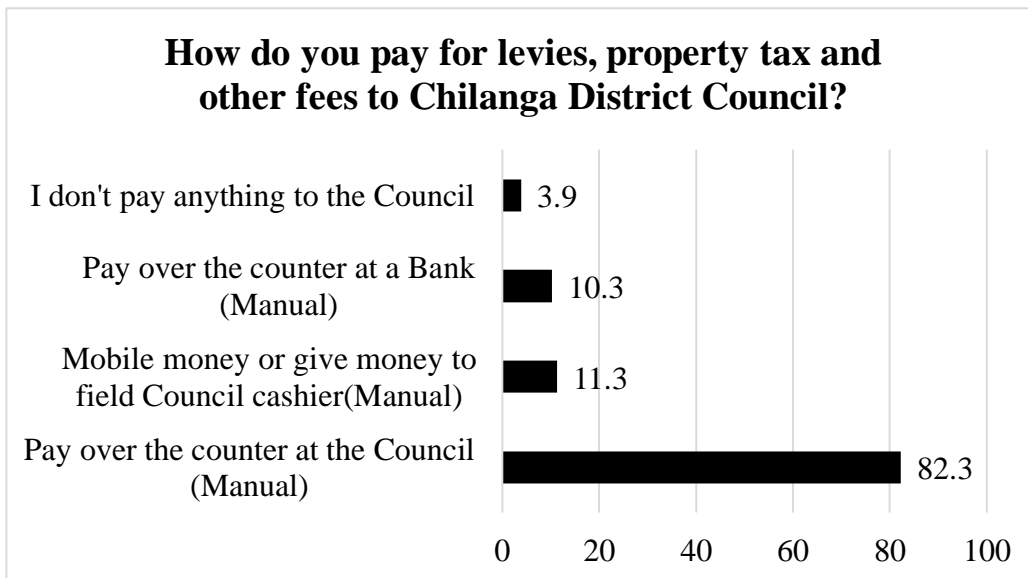


Figure 4:2 Mode of Revenue Payment

Key social demographic factors of both the clientele and employees of CDC were tested against the mode of payment of levies. The measure of association indicated that age group, levels of education and employment status were statistically significant ($p=0.01$) associated with paying levies of which the majority paid manually (Table 4.1). None of the social and demographic factors of employees of CDC were statistically significantly associated with the mode of revenue collection (Table 4.1 and 4.2).

Table 4:1: Association of clientele characteristics with mode of payment of levies

Characteristics of Chilanga District residents	Total number of respondents = 389 (%)	How do you pay for levies, property tax and other fees to Chilanga District Council?			
		Manually = 345 (88.7%)	Electronically = 44 (11.3%)	X^2	P
Gender				3.1	0.08
Female	181 (46.5)	166 (91.7)	15 (8.3)		
Male	208 (53.5)	179 (86.1)	29 (13.9)		
Age group				53.0	0.01
18-24	9 (2.3)	9 (100)	0 (0.0)		
25-29	67 (17.2)	67 (100)	0 (0.0)		
30-34	61 (15.7)	61 (100)	0 (0.0)		
35-39	86 (22.1)	68 (79.1)	18 (20.9)		
40-44	70 (18.0)	63 (90.0)	7 (10.0)		
45-49	48 (12.3)	33 (68.8)	15 (31.2)		
50-54	31 (8.0)	31 (100)	0 (0.0)		
55-59	14 (3.6)	10 (71.4)	4 (28.6)		
60-64	3 (1)	3 (100)	0 (0.0)		
Levels of education				43.9	0.01
Certificate	165 (42.4)	161 (97.6)	4 (2.4)		
Diploma	81 (20.8)	77 (95.1)	4 (4.9)		
Bachelor's Degree	118 (30.3)	89 (75.4)	29 (24.6)		
Master's Degree	25 (6.4)	18 (72.0)	7 (28.0)		
Employment Status				45.4	0.01
Not working	28 (7.2)	24 (85.7)	4 (14.3)		
Self-employed	186 (47.8)	182 (97.9)	4 (2.1)		
Pensioner	29 (7.5)	29 (100)	0 (0.0)		
Salaried worker	146 (37.5)	110 (75.3)	36 (24.7)		

Table 4:2: Association of employees of CDC characteristics with mode of payment of levies

Characteristics of Chilanga District Council staff	Total number of respondents = 13 (%)	Which mode of revenue collection does the council use?			
		Manually = 1 (7.7%)	Both = 12 (92.3%)	χ^2	P
Gender				0.68	1.0
Female	5 (38.5)	0 (0.0)	5 (100)		
Male	8 (61.5)	1 (12.5)	7 (87.5)		
Age group				1.7	1.0
25-29	3 (23.1)	0 (0.0)	3 (100)		
30-34	4 (30.8)	0 (0.0)	4 (100)		
35-39	5 (58.5)	1 (20.0)	4 (80.0)		
40-44	1 (7.7)	0 (0.0)	1 (100)		
Levels of education				2.4	1.0
Certificate	4 (30.8)	0 (0.0)	4 (100)		
Diploma	3 (23.1)	0 (0.0)	3 (100)		
Bachelor's degree	4 (30.8)	1 (25.0)	3 (75.0)		
Master's degree	2 (15.4)	0 (0.0)	2 (100)		
Position at Chilanga district council				3.6	0.50
Revenue collector	6 (46.2)	0 (0.0)	6 (100)		
Revenue Chief Cashier	2 (15.4)	0 (0.0)	2 (100)		
Revenue Chief Accountant	1 (7.7)	0 (0.0)	1 (100)		
Assistant account	1 (7.7)	0 (0.0)	1 (100)		
Internal auditor	3 (23.1)	1 (7.7)	2 (66.7)		

4.1.2 To establish the extent to which ICT model has been adopted in revenue collection

In (Table 4.4), it shows that Bank transfers are the electronic platform currently used to receive payments (46.2 % [6/13]) as well as point-of-sale or swiping using debit cards (38.5 % [5/13]), and they stated that they prefer an absolute electronic revenue collection mode (92.3 % [12/13]).

The majority (57.1% [222/389]) also stated that there is no electronic or digital platform currently used to make payment of levies, property tax, fees or other forms of taxes at the Council. However, 17.7 % (69/389) reported that Bank Transfers are currently used to pay for taxes at the Council. They indicated that business licenses (29.8 % [116/389]) and property rates (24.4 % [95/389]) are taxes paid by the majority (Table 4.4).

The majority of the staff (61.5% [8/13]) strongly disagreed while clientele (64.8 % [252/389]) strongly agreed and agreed that they think that electronic/digital payment of levies and taxes has not been fully adopted at Chilanga District Council and has made payment of taxes easy (Figure 4.3). They also both agreed {staff (100 % [13/13]) and clientele (57.8 % [225/389])} people who influence their behavior think that they should use electronic/digital platform to pay revenue at Chilanga District Council (Table 4.3).

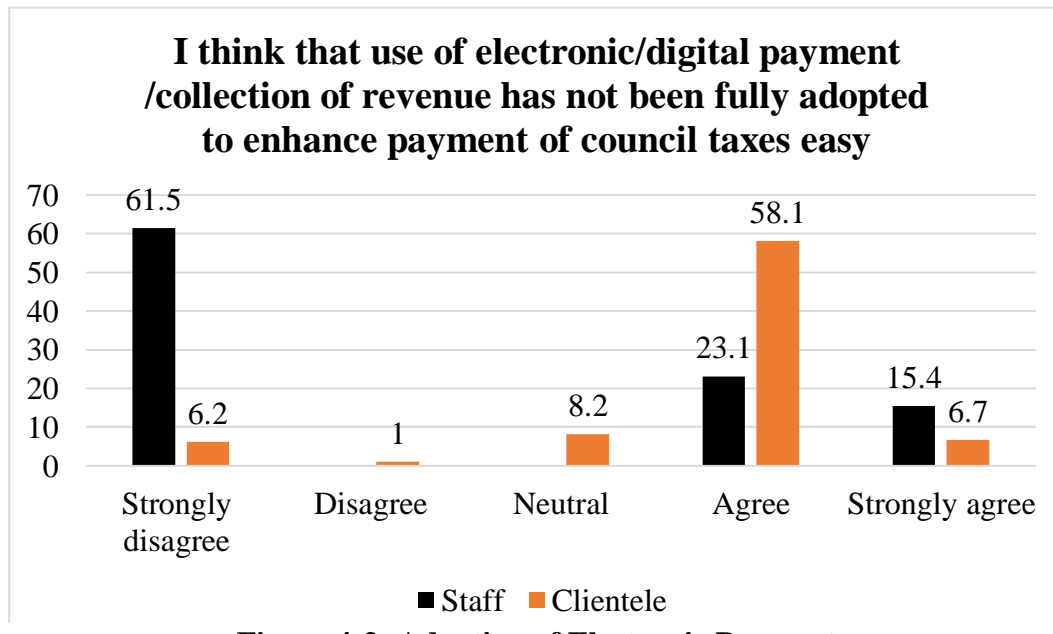


Figure 4:3: Adoption of Electronic Payment

Although all (100 % [13/13]) of the staff agreed that help is available on accessing electronic payment the clientele were neutral with 50.9 % (198/389) disagreeing and 49.1 % (191/389) agreeing. Furthermore, while 76.9 % (10/13) of the staff strongly agreed and agreed that online platforms have most of the payment services they need from the Chilanga District Council 71.7 % (279/389) of clientele disagreed and strongly disagreed. In addition, the staff and clientele disagreed; as 84.6 % (11/13) of staff agreed that they are aware and understand the electronic payment services that are offered by Chilanga District Council 78.2 % (304/389) clientele disagreed and strongly disagreed to that. The disagreement between the staff and clientele was shown when 61.5 % (8/13) the staff agreed that they think that the adoption of electronic/digital payment of revenue services has been fairly implemented and there is improved customer compliance, work performance and revenue collection and 48.4 % (252/389) disagreed to that assertion (table 4.3).

4.1.3 To identify existing challenges faced in revenue collection

The study findings indicated that poor internet connectivity in some areas of the district is a major (61.5 % [8/13]) challenge that the council and taxpayers are currently facing, they added that Tax payer's poor knowledge on the existing digital/ICT payment platform is another challenge (30.8 % [4/13]). However, currently manual methods which ultimately results in costly and untimely revenue collection are the major (38.5 % [5/13]) challenges the council is facing in revenue collection (Table 4.4). The majority of the clientele (39.9 % [155/389]) reported that they find the current way of paying taxes at the Council moderately easy, however, the majority (50.4 % [196/389]) complained that long distance from their business places and homes to the council is another major challenge they face to make the tax payment (Figure 4.4 and Table 4.4).

To identify existing challenges faced in revenue collection

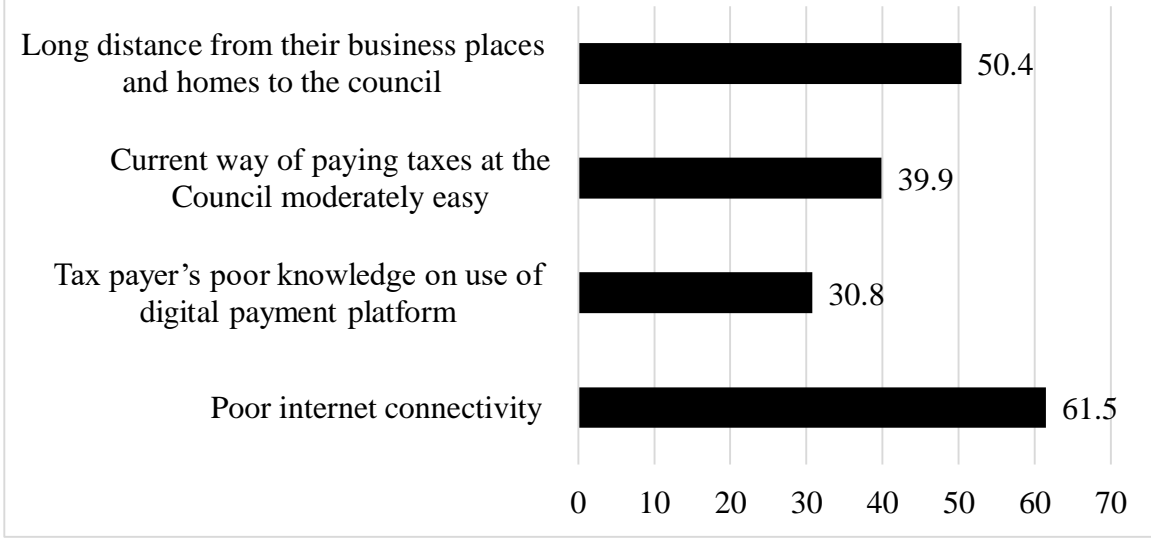


Figure 4:4: Challenges Faced

Table 4:3: Characteristics of CDC Staff and factors related to Revenue Collection

FACTORS RELATED TO USE ICT IN REVENUE COLLECTION IN CHILANGA DISTRICT	STAFF = 13 (%)	CLIENTELE = 389 (%)
I think that accessing information concerning payment of levies and taxes would be easy and effective at Chilanga district Council using electronic/digital platform		
Strongly disagree	8 (61.5)	19 (4.9)
Disagree	0 (0.0)	3.9)
Neutral	0 (0.0)	12 (2.6)
Agree	0 (0.0)	195 (50.1)
Strongly agree	5 (38.5)	148 (38.1)
I think use of electronic/digital payment system will reduce time and cost of paying council fees and taxes		
Strongly disagree	4 (30.8)	20 (5.1)
Disagree	0 (0.0)	4 (1.0)
Neutral	0 (0.0)	7 (1.8)
Agree	0 (0.0)	211 (54.2)
Strongly agree	9 (69.2)	147 (37.8)
I think that electronic/digital payment of levies and taxes has been fully adopted at Chilanga District Council and has made payment of taxes easy		
Strongly disagree	2 (15.4)	93 (23.9)
Disagree	8 (61.5)	223 (57.3)
Neutral	3 (23.1)	48 (12.3)
Agree	0 (0.0)	7 (1.8)
Strongly agree	0 (0.0)	18 (4.6)
People who influence my behavior think that I should use electronic/digital form to pay revenue at Chilanga District Council		
Strongly disagree	0 (0.0)	22 (5.7)
Disagree	0 (0.0)	47 (12.1)
Neutral	0 (0.0)	95 (24.4)
Agree	13 (100)	174 (44.7)
Strongly agree	0 (0.0)	51 (13.1)
Mobile phones makes it easy to make payment electronically		
Strongly disagree	8 (61.5)	4 (1.0)
Neutral	0 (0.0)	20 (5.1)
Agree	5 (38.5)	259 (66.6)
Strongly agree	0 (0.0)	106 (27.3)
It would be easy to make payments to the Chilanga Council electronically because many people own mobile phones		
Strongly disagree	0 (0.0)	4 (1.0)
Neutral	0 (0.0)	28 (7.2)
Agree	10 (76.9)	235 (60.4)
Strongly agree	3 (23.1)	122 (31.4)
I think that use of electronic/digital payment /collection of revenue has not been fully adopted to enhance payment of council taxes easy		
Strongly disagree	8 (61.5)	24 (6.2)
Disagree	0 (0.0)	4 (1.0)
Neutral	0 (0.0)	32 (8.2)
Agree	3 (23.1)	226 (58.1)
Strongly agree	2 (15.4)	26 (6.7)
I have the means required to use electronic payments services		
Strongly disagree	0 (0.0)	5 (1.3)
Disagree	0 (0.0)	5 (1.3)
Neutral	3 (23.1)	25 (6.4)
Agree	10 (76.9)	280 (72.0)

Strongly agree	0 (0.0)	74 (19.0)
I have the knowledge necessary to access electronic payment services		
Strongly disagree		0 (0.0)
Disagree	0 (0.0)	38 (9.8)
Neutral	0 (0.0)	82 (20.3)
Agree	13 (100)	214 (55.0)
Strongly agree	0 (0.0)	55 (14.1)
Help/guidance is available on accessing electronic payment		
Strongly disagree	0 (0.0)	18 (4.6)
Disagree	0 (0.0)	115 (29.6)
Neutral	0 (0.0)	130 (33.4)
Agree	13 (100)	116 (29.8)
Strongly agree	0 (0.0)	10 (2.6)
Online platforms have most of the payment services I need from the Chilanga District Council		
Strongly disagree	0 (0.0)	63 (16.2)
Disagree	3 (23.1)	216 (55.5)
Neutral	0 (0.0)	65 (16.7)
Agree	2 (15.4)	10 (2.6)
Strongly agree	8 (61.5)	35 (9.0)
I am aware and understand the electronic payment services that are offered by Chilanga District Council		
Strongly disagree	0 (0.0)	84 (21.6)
Disagree	2 (15.4)	220 (56.6)
Neutral	0 (0.0)	56 (14.4)
Agree	11 (84.6)	20 (5.1)
Strongly agree	0 (0.0)	9 (2.3)
I think that adoption of electronic/digital payment of revenue services have been fairly implemented and there is improved customer compliance, work performance and revenue collection		
Strongly disagree	0 (0.0)	50 (12.1)
Disagree	2 (15.4)	141 (36.3)
Neutral	3 (23.1)	111 (28.6)
Agree	8 (61.5)	75 (19.3)
Strongly agree	0 (0.0)	12 (3.1)
How often do you visit the Chilanga District Council for payment of levies, fees and charges?		
Once a quarter	11 (84.6)	47 (12.1)
Once a year	2 (15.4)	191 (49.1)
Half a year	0 (0.0)	107 (27.5)
When need arises	0 (0.0)	9 (2.3)
Never visit	0 (0.0)	35 (9.0)
Frequency of account balance enquiry		
Never	3 (23.1)	107 (27.5)
Rarely	8 (61.5)	91 (23.4)
Sometimes	0 (0.0)	173 (44.5)
Often	2 (15.4)	4 (1.0)
Always		14 (3.6)
Would you prefer to access these service anytime and anywhere at your convenience?		
No	0 (0.0)	10 (2.6)
Yes	13 (100)	362 (93.1)
Not Sure	0 (0.0)	17 (4.4)
Frequency of Bill payment		
Never	2 (15.4)	49 (12.6)
Rarely	0 (0.0)	55 (14.1)
Sometimes	0 (0.0)	235 (60.4)
Often	11 (84.6)	30 (7.7)
Always	0 (0.0)	20 (5.1)

Viewing of historical payment information		
Never	2 (16.7)	196 (50.3)
Rarely	3 (25.0)	63 (16.2)
Sometimes	0 (0.0)	114 (29.3)
Always	7 (58.3)	16 (4.1)

Source: Author (2022)

4.1.4 To determine possibility of enhancing adoption of ICT model for revenue collection

Therefore, the majority (84.6 % [11/13]) suggested the introduction of an electronic payment platform to resolve the current challenges faced in revenue collection (Table 4.5). During spontaneous informal interviews, clientele proposed that a revenue collection office should be opened in Kalundu and Kanzivwa to reduce the long distance to the Council office. Alternatively, the council should introduce electronic payment point platforms like the way ZESCO and Multi-choice/DSTV have done. Because whenever they go to pay tax at the Council they lose out on sales when they close their business to travel to the Council. In that regard, 61.5 % (8/13) of the staff strongly disagreed they ‘think that the use of electronic or digital payment of revenue has not been fully adopted to enhance payment of council taxes easily’ as opposed to 64.8 % (252/398) that agreed and strongly agreed’ (Table 4.3).

All the respondents agreed that they have the means required to use electronic payment services with the majority 76.9 % (10/13) of the staff and 91.0 % (354/389) of clientele in agreement. Similarly, they all agreed that they have the knowledge on how to access electronic payment services with 100% (13/13) of the staff and 69.1 % (269/389) of the clientele confirming the affirmative (Table 4.3).

Table 4:4: Characteristics of CDC Clientele and factors related to Revenue Collection

Viewpoints of CDC Clientele and factors related to Revenue Collection	Total number of respondents = 389 (%)
What electronic or digital platforms are currently being used for payment of levies, property tax and other fees to Chilanga District Council?	
Non	222 (57.1)
Not aware	28 (7.2)
It is done physically by exchanging money through hands;	8 (2.1)
Bank Transfer and Mobile Money	4 (1.0)
Bank Transfer	69 (17.7)
Mobile Money	28 (7.2)
Deposit at Bank and present receipt at counter	14 (3.6)
Point-of-Sale or swiping/debit card	16 (4.1)
What payment do you pay at Chilanga District Council?	

Business license and Property rates	4 (1.0)
Business license	116 (29.8)
Property rates	95 (24.4)
Property rates and Business license	12 (3.1)
Business license and Fire certificate	23 (6.0)
Business license, Health permit, liquor license and fire certificate	4 (1.0)
Business license and Personal levy	4 (1.0)
Property rates, Business license and fire certificate	10 (2.6)
Business license, fire certificate and personal levy	5 (1.3)
Property rates and Market store	14 (3.6)
Market store	13 (3.3)
Business license and Fire certificate	55 (14.1)
Business license, Fire Certificate and health permit	6 (1.5)
Business license and garbage collection	4 (1.0)
Business license and 10fire certificate	5 (1.3)
Nothing	19 (4.9)
How easy is the current way of paying council levies, taxes and fees at Chilanga District Council?	
Difficult	117 (30.1)
Moderate	155 (39.9)
Easy	117 (30.1)
What challenges do you face with regard to payment of council levies, taxes and fees at Chilanga District Council?	
Long distance from my business place /home to the council	196 (50.4)
I do not have time to go the council to pay council levies	90 (23.1)
I don't understand why I need to pay money to the council	19 (4.9)
Long distance to bank & council. Queues at Bank and cashier's office	4 (1.0)
Time period in queue at the Bank	5 (1.3)
Non	75 (19.3)

Source: Author (2022)

The Council staff strongly disagreed (61.5 % [8/13]) that they think accessing information concerning payment of levies and taxes would be easy and effective at Chilanga district Council using electronic/digital platform while 88.2 % (343/389) of the Clientele agreed and strongly agreed to that statement. However, 69.2 % (9/13) of the staff strongly agreed and 92.0 % ((358/389) of the Clientele agreed and strongly agreed that they think the use of electronic/digital payment system will reduce time and cost of paying council fees and taxes (Table 4.3).

On mobile phones making it easy to make payment electronically, the majority of the staff (61.5 % [8/13]) strongly disagreed whereas the majority of the clientele (93.9 % [365/389]) agreed and strongly agreed to that, though they both agreed and strongly agreed (100.0% [13/13]) and (91.8 % [357/389]) that it would be easy to make payments to the Chilanga Council electronically because many people own mobile phones (Table 4.3).

The majority of the staff, which is 84.6 % (11/13) reported that they visited Chilanga District Council for payment of levies, fees or charges once a quarter and 15.4 % (2/13) once a year the same as the 49.1 % (191/389) clientele while 12.1 % (47/389) of the clientele visited once a quarter like the majority of the staff. The majority of the staff (61.5% [8/13]) rarely visited the Council to enquire balance of their account whereas 44.5 % (173/389) clientele did that sometimes. The majority of the staff (84.6 % [11/13]) and clientele (60.4 % [235/389]) visited the Council often and sometimes pay the bills respectively. The majority (58.3 % [7/13]) visited the Council to always view historical payment information while the majority (50.3 % [196/389]) of the clientele never did that. They both therefore, agreed that they would prefer to access these services anytime and anywhere at their convenience with all (100 % [13/13]) of the staff indicating yes and 93.1 % (362/389) clientele stating the same (Table 4.3).

Table 4:5: Factors related to use of ICT in Revenue Collection at CDC

FACTORS RELATED TO USE ICT IN REVENUE COLLECTION IN CHILANGA DISTRICT	STAFF = 13 (%)	CLIENTELE = 389 (%)
I think that accessing information concerning payment of levies and taxes would be easy and effective at Chilanga district Council using electronic/digital platform		
Strongly disagree	8 (61.5)	19 (4.9)
Disagree	0 (0.0)	3.9
Neutral	0 (0.0)	12 (2.6)
Agree	0 (0.0)	195 (50.1)
Strongly agree	5 (38.5)	148 (38.1)
I think use of electronic/digital payment system will reduce time and cost of paying council fees and taxes		
Strongly disagree	4 (30.8)	20 (5.1)
Disagree	0 (0.0)	4 (1.0)
Neutral	0 (0.0)	7 (1.8)
Agree	0 (0.0)	211 (54.2)
Strongly agree	9 (69.2)	147 (37.8)
I think that electronic/digital payment of levies and taxes has been fully adopted at Chilanga District Council and has made payment of taxes easy		
Strongly disagree	2 (15.4)	93 (23.9)
Disagree	8 (61.5)	223 (57.3)
Neutral	3 (23.1)	48 (12.3)
Agree	0 (0.0)	7 (1.8)
Strongly agree	0 (0.0)	18 (4.6)
People who influence my behavior think that I should use electronic/digital form to pay revenue at Chilanga District Council		
Strongly disagree	0 (0.0)	22 (5.7)
Disagree	0 (0.0)	47 (12.1)
Neutral	0 (0.0)	95 (24.4)
Agree	13 (100)	174 (44.7)
Strongly agree	0 (0.0)	51 (13.1)
Mobile phones makes it easy to make payment electronically		
Strongly disagree	8 (61.5)	4 (1.0)
Neutral	0 (0.0)	20 (5.1)
Agree	5 (38.5)	259 (66.6)

Strongly agree	0 (0.0)	106 (27.3)
I would be easy to make payments to the Chilanga Council electronically because many people own mobile phones		
Strongly disagree	0 (0.0)	4 (1.0)
Neutral	0 (0.0)	28 (7.2)
Agree	10 (76.9)	235 (60.4)
Strongly agree	3 (23.1)	122 (31.4)
I think that use of electronic/digital payment /collection of revenue has not been fully adopted to enhance payment of council taxes easy		
Strongly disagree	8 (61.5)	24 (6.2)
Disagree	0 (0.0)	4 (1.0)
Neutral	0 (0.0)	32 (8.2)
Agree	3 (23.1)	226 (58.1)
Strongly agree	2 (15.4)	26 (6.7)
I have the means required to use electronic payments services		
Strongly disagree	0 (0.0)	5 (1.3)
Disagree	0 (0.0)	5 (1.3)
Neutral	3 (23.1)	25 (6.4)
Agree	10 (76.9)	280 (72.0)
Strongly agree	0 (0.0)	74 (19.0)
I have the knowledge necessary to access electronic payment services		
Strongly disagree		0 (0.0)
Disagree	0 (0.0)	38 (9.8)
Neutral	0 (0.0)	82 (20.3)
Agree	13 (100)	214 (55.0)
Strongly agree	0 (0.0)	55 (14.1)
Help/guidance is available on accessing electronic payment		
Strongly disagree	0 (0.0)	18 (4.6)
Disagree	0 (0.0)	115 (29.6)
Neutral	0 (0.0)	130 (33.4)
Agree	13 (100)	116 (29.8)
Strongly agree	0 (0.0)	10 (2.6)
Online platforms have most of the payment services I need from the Chilanga District Council		
Strongly disagree	0 (0.0)	63 (16.2)
Disagree	3 (23.1)	216 (55.5)
Neutral	0 (0.0)	65 (16.7)
Agree	2 (15.4)	10 (2.6)
Strongly agree	8 (61.5)	35 (9.0)
I am aware and understand the electronic payment services that are offered by Chilanga District Council		
Strongly disagree	0 (0.0)	84 (21.6)
Disagree	2 (15.4)	220 (56.6)
Neutral	0 (0.0)	56 (14.4)
Agree	11 (84.6)	20 (5.1)
Strongly agree	0 (0.0)	9 (2.3)
I think that adoption of electronic/digital payment of revenue services have been fairly implemented and there is improved customer compliance, work performance and revenue collection		
Strongly disagree	0 (0.0)	50 (12.1)
Disagree	2 (15.4)	141 (36.3)
Neutral	3 (23.1)	111 (28.6)
Agree	8 (61.5)	75 (19.3)
Strongly agree	0 (0.0)	12 (3.1)
How often do you visit the Chilanga District Council for payment of levies, fees and charges?		
Once a quarter	11 (84.6)	47 (12.1)
Once a year	2 (15.4)	191 (49.1)

Half a year	0 (0.0)	107 (27.5)
When need arises	0 (0.0)	9 (2.3)
Never visit	0 (0.0)	35 (9.0)
Frequency of account balance enquiry		
Never	3 (23.1)	107 (27.5)
Rarely	8 (61.5)	91 (23.4)
Sometimes	0 (0.0)	173 (44.5)
Often	2 (15.4)	4 (1.0)
Always		14 (3.6)
Would you prefer to access these service anytime and anywhere at your convenience?		
No	0 (0.0)	10 (2.6)
Yes	13 (100)	362 (93.1)
Not Sure	0 (0.0)	17 (4.4)
Frequency of Bill payment		
Never	2 (15.4)	49 (12.6)
Rarely	0 (0.0)	55 (14.1)
Sometimes	0 (0.0)	235 (60.4)
Often	11 (84.6)	30 (7.7)
Always	0 (0.0)	20 (5.1)
Viewing of historical payment information		
Never	2 (16.7)	196 (50.3)
Rarely	3 (25.0)	63 (16.2)
Sometimes	0 (0.0)	114 (29.3)
Always	7 (58.3)	16 (4.1)

Source: Author (2022)

Table 4.4 shows whether there were statistically significant differences between the agreement levels of the Chilanga District Council and their clientele. There were statistically significant proportional means differences on the statement ‘People who influence my behavior think that I should use electronic/digital form to pay revenue at Chilanga District Council’ with staff proportionally agreeing more than the clientele (55.3%, 95 % CI: 4.8,63, P = 0.01), ‘I think that use of electronic/digital payment /collection of revenue has not been fully adopted to enhance payment of council taxes easy’ with staff strongly disagreeing than clientele (55.3 %, 95 % CI: 2,90, P = 0.01), ‘I have the knowledge necessary to access electronic payment services’ with all staff agreeing than Clientele (45 %, 95% CI: 38,52, P = 0.01), ‘Help/guidance is available on accessing electronic payment’ with all staff agreeing than clientele (70.2%, 95 % CI: 61,78, P = 0.01), ‘Online platforms have most of the payment services I need from the Chilanga District Council’ more staff strongly disagreeing than Clientele (28.5 %, 95 % CI: 0.6,7, P 0.04), ‘I am aware and understand the electronic payment services that are offered by Chilanga District Council’ more staff agree than Clientele (79.5 %, 95 % CI: 56,100, P = 0.01), ‘I think that adoption of electronic/digital payment of revenue services have been fairly implemented and there is improved customer compliance, work performance and revenue collection’ with more staff agree than Clientele (42.2 %, 95 % CI: 7,77, P = 0.01), ‘How often do you visit the Chilanga District Council for payment of levies, fees and charges?’ with more staff visiting once a quarter than Clientele (72.5 % 95

%CI: 49,96, P = 0.01), 'Frequency of account balance enquiry 'with more staff reporting rarely frequenting the Council for account balance as compared to clientele (23.4 %, 95 % CI: 15,32, P = 0.02) and more Clientele often frequenting the Council than staff for account balance enquiry (85 %, 95 %CI: 13,35, P = 0.03); more staff frequented the Council for Bill payment than Clientele with a proportional mean difference of 77 %, 95 % CI 54,100); and more staff as opposed to clientele frequented the Council for viewing of historical payment information with a proportional mean difference of 54 %, 95 % CI: 16,92, P = 0.01). Other proportional mean differences were on the borderline where both staff and clientele strongly agreed on 'I think the use of electronic/digital payment system will reduce time and cost of paying council fees and taxes (31.4 %, 95 % CI: 0.2,63, P = 0.06), and both staff and clientele agreed on 'Mobile phones makes it easy to make payment electronically' (60.5 %, 95 % CI: 25, 96, P = 0.05).

Table 4:6: Factors Related To Use ICT in Revenue Collection in Chilanga District

FACTORS RELATED TO USE ICT IN REVENUE COLLECTION IN CHILANGA DISTRICT	STAFF = 13 (%)	CLIENTELE = 389 (%)	Z Test Mean Proportional Difference N (%)	95 % CI	P
I think that accessing information concerning payment of levies and taxes would be easy and effective at Chilanga district Council using electronic/digital platform					
Strongly disagree	8 (61.5)	19 (4.9)	11 (56.6)	3 ,53	0.55
Disagree	*0 (0.0)	15 (3.9)			
Neutral	*0 (0.0)	12 (2.6)			
Agree	*0 (0.0)	195 (50.1)			
Strongly agree	5 (38.5)	148 (38.1)	143 (0.4)	0.04,44	0.99
I think use of electronic/digital payment system will reduce time and cost of paying council fees and taxes					
Strongly disagree	4 (30.8)	20 (5.1)	16 (25.7)	0.2,72	0.11
Disagree	*0 (0.0)	4 (1.0)			
Neutral	*0 (0.0)	7 (1.8)			
Agree	*0 (0.0)	211 (54.2)			
Strongly agree	9 (69.2)	147 (37.8)	138 (31.4)	0.2,63	0.06
I think that electronic/digital payment of levies and taxes has been fully adopted at Chilanga District Council and has made payment of taxes easy					
Strongly disagree	2 (15.4)	93 (23.9)	91 (8.5)	5.9,42	0.78
Disagree	8 (61.5)	223 (57.3)	215 (4.2)	3,39	0.81
Neutral	3 (23.1)	48 (12.3)	45 (10.8)	0.4,59	0.59
Agree	*0 (0.0)	7 (1.8)			
Strongly agree	*0 (0.0)	18 (4.6)			
People who influence my behavior think that I should use electronic/digital form to pay revenue at Chilanga District Council					

Strongly disagree	*0 (0.0)	22 (5.7)			
Disagree	*0 (0.0)	47 (12.1)			
Neutral	*0 (0.0)	95 (24.4)			
Agree	13 (100)	174 (44.7)	161 (55.3)	4,8,63	0.01
Strongly agree	*0 (0.0)	51 (13.1)			
Mobile phones makes it easy to make payment electronically					
Strongly disagree	8 (61.5)	4 (1.0)	4 (60.5)	25,96	0.05
Neutral	*0 (0.0)	20 (5.1)			
Agree	5 (38.5)	259 (66.6)	254 (28.1)	0,7,15	0.19
Strongly agree	*0 (0.0)	106 (27.3)			
It would be easy to make payments to the Chilanga Council electronically because many people own mobile phones					
Strongly disagree	*0 (0.0)	4 (1.0)			
Neutral	*0 (0.0)	28 (7.2)			
Agree	10 (76.9)	235 (60.4)	225 (16.5)	0,1,43	0.29
Strongly agree	3 (23.1)	122 (31.4)	119 (8.3)	0,6,40	0.76
I think that use of electronic/digital payment /collection of revenue has not been fully adopted to enhance payment of council taxes easy					
Strongly disagree	8 (61.5)	24 (6.2)	16 (55.3)	2,90	0.01
Disagree	*0 (0.0)	4 (1.0)			
Neutral	*0 (0.0)	32 (8.2)			
Agree	3 (23.1)	226 (58.1)	223 (35)	0,8,13	0.22
Strongly agree	2 (15.4)	26 (6.7)	24 (8.7)	0,4,60	0.64
I have the means required to use electronic payments services					
Strongly disagree	*0 (0.0)	5 (1.3)			
Disagree	*0 (0.0)	5 (1.3)			
Neutral	3 (23.1)	25 (6.4)	22 (16.7)	0,3,65	0.32
Agree	10 (76.9)	280 (72.0)	270 (4.9)	0,2,32	0.73
Strongly agree	*0 (0.0)	74 (19.0)			
I have the knowledge necessary to access electronic payment services					
Strongly disagree	*0 (0.0)	0 (0.0)			
Disagree	*0 (0.0)	38 (9.8)			
Neutral	*0 (0.0)	82 (20.3)			
Agree	13 (100)	214 (55.0)	201 (45)	38,52	0.01
Strongly agree	*0 (0.0)	55 (14.1)			
Help/guidance is available on accessing electronic payment					
Strongly disagree	*0 (0.0)	18 (4.6)			
Disagree	*0 (0.0)	115 (29.6)			
Neutral	*0 (0.0)	130 (33.4)			
Agree	13 (100)	116 (29.8)	103 (70.2)	61,78	0.01
Strongly agree	*0 (0.0)	10 (2.6)			
Online platforms have most of the payment services I need from the Chilanga District Council					
Strongly disagree	*0 (0.0)	63 (16.2)			
Disagree	3 (23.1)	216 (55.5)	213 (32.4)	0,8,16	0.26
Neutral	*0 (0.0)	65 (16.7)			
Agree	2 (15.4)	10 (2.6)	8 (12.8)	0,4,64	0.44
Strongly agree	8 (61.5)	35 (9.0)	27 (28.5)	0,6,7	0.04

I am aware and understand the electronic payment services that are offered by Chilanga District Council					
Strongly disagree	*0 (0.0)	84 (21.6)			
Disagree	2 (15.4)	220 (56.6)	218 (41.2)	0,9,9	0.24
Neutral	*0 (0.0)	56 (14.4)			
Agree	11 (84.6)	20 (5.1)	9 (79.5)	56,100	0.01
Strongly agree	*0 (0.0)	9 (2.3)			
I think that adoption of electronic/digital payment of revenue services have been fairly implemented and there is improved customer compliance, work performance and revenue collection					
Strongly disagree	*0 (0.0)	50 (12.1)			
Disagree	2 (15.4)	141 (36.3)	139 (20.9)	0,7,30	054
Neutral	3 (23.1)	111 (28.6)	108 (5.5)	0,5,43	0.84
Agree	8 (61.5)	75 (19.3)	67 (42.2)	7,77	0.01
Strongly agree	*0 (0.0)	12 (3.1)			
How often do you visit the Chilanga District Council for payment of levies, fees and charges?					
Once a quarter	11 (84.6)	47 (12.1)	36 (72.5)	49,96	0.01
Once a year	2 (15.4)	191 (49.1)	189 (33.7)	0,8,17	0.34
Half a year	*0 (0.0)	107 (27.5)			
When need arises	*0 (0.0)	9 (2.3)			
Never visit	*0 (0.0)	35 (9.0)			
Frequency of account balance enquiry					
Never	3 (23.1)	107 (27.5)	104 (4.4)	0,5,44	
Rarely	8 (61.5)	91 (23.4)	73 (23.4)	15,32	0.02
Sometimes	*0 (0.0)	173 (44.5)			
Often	2 (15.4)	4 (1.0)	2 (85)	13,35	0.03
Always	*0 (0.0)	14 (3.6)			
Would you prefer to access these service anytime and anywhere at your convenience?					
No	*0 (0.0)0	10 (2.6)			
Yes	13 (100)	362 (93.1)	348 (7)	4,10	0.33
Not Sure	*0 (0.0)0 (0	17 (4.4)			
Frequency of Bill payment					
Never	2 (15.4)	49 (12.6)	47 (3)	0,5,54	0.91
Rarely	*0 (0.0)	55 (14.1)			
Sometimes	*0 (0.0)	235 (60.4)			
Often	11 (84.6)	30 (7.7)	29 (77)	54,1.0	0.01
Always	*0 (0.0)	20 (5.1)			
Viewing of historical payment information					
Never	2 (16.7)	196 (50.3)	194 (34)	08,19	0.34
Rarely	3 (25.0)	63 (16.2)	60 (9)	0,4,59	0.69
Sometimes	*0 (0.0)	114 (29.3)			
Always	7 (58.3)	16 (4.1)	14 (54)	16,92	0.01

Source: Author (2022)

4.2 Chapter Summary

The chapter presented the study findings aimed at in the study objectives and as such the study questions have been answered. The findings were displayed in detail in the charts and tables and briefly described the key findings concerning specific tables and study objectives and questions. The next chapter is a discussion of the study's key findings.

CHAPTER 5

DISCUSSION OF THE STUDY FINDINGS

5.0 Introduction

In chapter four, key study findings were presented. This chapter presents a concise discourse on the key study findings. The discussion is presented under four main sections themed according to the study objectives and questions. The chapter ends with a summary.

5.1 Current ways of revenue collection

The study established that the mode of revenue collection used by the Chilanga District Council is a mixture of both manual and electronic. However, the manual revenue collection method is the most highly used model where revenue is paid over the counter at the council by clients. This shows that the usage and acceptance of electronic modes of payment in the district is still in its infancy. This speaks to inadequate deliberate intervention to scale up the use of technologically enabled systems in the revenue collection process. Due to this model of revenue collection, the council is facing untimely revenue collection because manual collection is not only costly but also labor-intensive to both the council and clients. These findings entail that inefficient means of collecting revenue at the council still exist, and efforts to scale up electronic revenue collection are inevitable.

Contrary to these findings, the use of electronic payment means of paying or collecting revenue brings about efficiency in revenue collection for both public and private institutions. The use of Information technology systems helped Kiambu County in Kenya to raise its revenue collection to 60% after automating its revenue collection process (Jananga,2018). The study found a significant relationship between Information Systems with both efficiency and effectiveness in revenue collection. It further concluded that the use of Technology resulted in timely collection of revenue, enhanced internal controls, and management integrity (Otieno et al., 2013); the automated system impacted positively on revenue collection at the Authority; and there was an increased rate in revenue collection after the implementation of Simba system. These findings echoed Henry et al. (2018) study findings which reported that automation of revenue collection contributed to controlled, accurate and timely recording of revenue. Mobile phone technology and e-wallets have a positive influence on the revenue collection process by providing a platform that makes the process of paying taxes and fees simpler, faster and easier thus eliminating the complexities of handling cash. Mobile money

payment services can cut down the levels of corruption among staff and eliminate fraud by brokers at City Hall. The adoption of Technology by the Rwanda Revenue Authority enabled the Authority to register 100% in gross revenue mobilization while the Kenya Revenue Authority registered 90% (Kabaara, 2018).

Information System (LGRCIS) in revenue collection brought benefits such as improved local government revenue collection, improved revenue administration and improved efficiency and transparency over the paper-based system. It also improved taxpayer compliance. The online payment technology of LGRCIS not only led to improved taxpayer compliance but also resulted in reduced cost of revenue collection and opportunities for corruption, bribery and extortion. Therefore, the use of ICT provided taxpayers with a range of e-services and e-payment options that make the process of paying taxes or fees faster and easier (McCluskey et al., 2017). The use of ICT does enhance revenue collection and through online payment technology payment processes are made short and collections are monitored in real time (Mushi, 2018).

5.2 Extent to which ICT model has been adopted in revenue collection

Although there is a huge willingness from clients to embrace electronic payment of revenue, Chilanga District Council(CDC) has not yet fully invested in other types of electronic payment methods other than direct bank deposits and point-of-sale or swiping services using debit cards. Therefore, it is concluded that the adoption of ICT in the revenue collection process at Chilanga District Council has not yet reached the stage at which the benefit satisfies clientele hence clients still have to visit the council revenue office for payment of taxes. This is coupled with low sensitization of the available banking payment platform.

5.3 Existing challenges faced in revenue collection

Revenue collection at Chilanga District Council is mostly done manually and centrally at the Civic Center office, posing challenges of delayed collection, long queues, long distances for clients and high collection costs on the part of the council. For example, the distribution of property tax bills and demand notices has to be done physically by visiting the homes and business places of taxpayers. Low compliance on the part of clients who are not geographically near the Civic Center. Low knowledge levels among clients on the use of electronic modes of payment currently being used by Chilanga District Council, such as swiping services using debit cards and direct bank transfers,

Due to a lack of efficient means of collecting revenue, the council faces low collection of its revenue. This is also heavily influenced by the vastness of the district and the lack of use of current electronic means of payment; therefore, clients travel long distances to make payments over the counter at the council offices. Some areas experience poor internet connectivity, and this contributes to clients' failure to pay using electronic means such as point-of-sale machines or direct bank transfers even if they were made available.

This challenge can easily be addressed by making electronic means of payment available to the clientele and training through actual demonstration on how to use both online and mobile money payment platforms especially to those with low literacy levels as agreed also by Mweetwa and Phiri, (2019).

5.4 Adoption of ICT model for revenue collection

Although members of staff at the council claimed that payments of revenue through ICT platforms have been fully adopted, the majority of clientele disagreed. The claim by the staff is based on a few clients who can make payments through direct bank transfer platforms while the majority of the clientele do not use ICT platforms to make payments but visit the council for payments or revenue collectors to visit them.

To enhance collection of revenue, there is a need for the adoption and implementation of a cost-effective ICT model that will promote electronic payment of taxes, fees, and charges such as e-wallets, debit cards and mobile payment. Further, there is a need to increase awareness of the use of available electronic payment systems as this will reduce the traffic of clients visiting Council offices for payments of taxes.

In order to enhance payment of revenue in areas with poor network coverage, it is important to decentralize payment points particularly in remote areas due to vast size of the district.

This approach will enhance compliance and help clients save time and money as they won't need to shut down their businesses for extended periods to pay their Council taxes.

In conclusion, the integration of ICT or electronic payment methods at Chilanga District Council is still in its initial phases. The majority of revenue collection is carried out manually and centrally at the Civic Center office. There is limited awareness among clients regarding the electronic payment options, such as debit card swiping and direct bank transfers. Some areas in the district have inadequate network coverage, presenting a connectivity challenge for

clients using electronic payment methods. Payment points are not distributed across the district, which is a concern given its large geographic size and the Council's central location.

5.5 Chapter Summary

The chapter discussed the study findings within the context of the findings and triangulated with related studies. The discussion was directed to key study findings which aimed to answer the study questions and attain study objectives. The next chapter makes a key conclusion on the study findings and makes salient implication of the findings and recommendations for operational implementation.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

A concise discussion of the study findings was carried out in chapter five. This chapter presents key conclusions on the findings and suggests recommendations for improving operations of revenue collection. Future studies are suggested too.

6.1 Conclusion

The conclusion is made by the study objectives and a summary of the conclusion in line with the aim of the study is provided. The chapter also presents recommendation points.

6.1.1 Current ways of revenue collection

The Chilanga District Council collects its revenue through both manual and electronic methods. However, the most used method is manual which requires clients to pay council fees and taxes in person at the council revenue office. This is largely because clients are unaware that there are electronic payment options available to them, like direct bank transfers. Therefore, the Council is experiencing inefficiencies in revenue collection as a result of the predominant manual collection method which is costly, labor intensive and prone to corruption.

6.1.2 Extent to which ICT model has been adopted in revenue collection

Although there is a huge willingness to embrace an electronic model for paying taxes and other fees and charges to the Chilanga District Council, the use of mobile and other electronic payment methods is currently quite low. Therefore, there is a need to have a deliberate policy to scale up the use of electronic payment systems for payment of council revenue. The study further reviewed that there is lack of sensitization on the currently available electronic means of paying taxes such as point-of-sale or swiping services using debit cards and direct bank transfer services.

6.1.3 Existing challenges faced in revenue collection

Chilanga District Council's revenue collection is mostly done manually and centrally at the Civic Center office. This presents the council with several challenges such as delayed

collection, long queues especially during business license renewal periods, long client travel distances and high collection costs on the part of the council.

6.1.4 Adoption of ICT model for revenue collection

In conclusion, the adoption of the ICT or electronic means of payment for revenue at Chilanga District Council is feasible provided the council's administration puts in place enough resources to upscale the use of ICT in its revenue collection function. Despite the district's poor internet connectivity in certain areas, there is high a willingness from clients to use mobile and other ICT-supported means of paying taxes, levies and other fees and charges to the council. However, inadequate sensitization, low awareness and promotion of electronic payment models have contributed to low usage of the available electronic means of payments currently being used at the council.

6.2 Recommendations

The study suggests the following recommendations:

- In order improve revenue collection, the council's administration should consider investing more funds in the development of an online, cost-effective, user-friendly revenue management application systems that facilitate online tax payments and electronic bill distribution.
- The council should also consider integrating mobile money services into its revenue collection function as the platform through which clients can pay for council taxes and receive e-bills. It is not only cheap to implement but accessible to many
- The Council administration should consider sensitize and increase awareness of the available electronic payment options to the council in order to improve revenue collection.
- The council should consider decentralization of revenue payment points particularly in remote parts of the district where internet access and connectivity is still a challenge.

6.3 Future studies

Future studies should assess the most cost-effective and user-friendly electronic payment systems and models which Zambian District Councils can adopt in order effectively mobilize and manage collection revenue.

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8.0 APPENDIX A: SEMI-STRUCTURED INTERVIEW GUIDE

Dear Respondent,

My name is Dominic Lisulo Sinjwala, student number 152655 from the University of Zambia pursuing of Master of Business Administration (General) in the Graduate School of Business. I am currently carrying out a research titled “*An Analysis of ‘Information, Communication and Technology’ Adoption on Revenue Collection Function in District Councils of Zambia: Case Study*” which is a partial fulfillment required for the award of the degree. You have been identified as one of the respondent for this study, which is purely academic, thus am requesting for your permission as a staff of Chilanga District Council, or as a Resident of Chilanga District to fill out the interview guide attached here to. The study is highly confidential as no personal identifiers will be collected or linked to the data you will provide. There is also no risk involved taking part in the study. Your anonymity, autonomy and respect will be highly upheld and you will be allowed to decide to discontinue or continue taking part in the study at any time you want without any repercussion. Extracting data will take approximately 5-15 minutes, there is no compensation for the time taken to do this exercise; your participation is absolutely voluntary, based on your goodwill.

Kindly contact me for any information or clarification using my mobile number +260 0977 876 706 or email address: dslisulo@gmail.com. Your support is highly appreciated.

1. Consent to take part:

- a) Accept
- b) Decline

8.1 SEMI-STRUCTURED INTERVIEW GUIDE

Part One: Demographic information (Please select)

2. Gender:

- a) Male
[1]
- b) Female
[2]

3. Marital Status:

- a) Single
[1]
- b) Married
[2]
- c) Separated
[3]
- d) Divorced
[4]

4. Age:

- a) 18-24
[1]
- b) 25-29
[2]
- c) 30-34
[3]
- d) 35-39
[4]
- e) 40-44
[5]

f) 45-49

[6]

g) 50-54

[7]

h) 55-59

[8]

i) 60 and above

[9]

5. Highest level of education:

a) Primary

[1]

b) Secondary

[2]

c) Certificate

[3]

d) Diploma

[4]

e) Bachelors' Degree

[5]

f) Master's Degree

[6]

g) Doctorate of Philosophy Degree

[7]

6. Type of employment:

a) Not working

[1]

b) Salaried worker

[2]

c) Self-employed

[3]

d) Pensioner

[4]

7. Are you a Chilanga District Council Employee, Resident, or Both?

a) Employee (go to part two)

[1]

b) Resident (go to part three)

[2]

8. If you are an Employee of Chilanga District Council, what is your main duty?

[]

PART TWO: CHILANGA DISTRICT COUNCIL (CDC) EMPLOYEE

9. Which mode of revenue collection do you prefer?

a) Manual

[1]

b) Electronic or digital

[2]

c) Both

[3]

10. What electronic platform do you currently use to receive payments?

a) Mobile Money

[1]

b) Point-of-Sale or swiping/debit card

[2]

c) Bank Transfer

[3]

d) Specify

[4]

e) I do not know

[5]

11. Would you prefer the revenue collection is absolutely electronic or digital?

a) Yes

[1]

b) No

[2]

c) Not Sure

[3]

12. What challenges do you anticipate CDC would face when the revenue collection is absolutely electronic?

.....
.....
.....
.....
.....
.....

13. What do you suggest should be done to improve revenue collection in CDC?

.....
.....
.....
.....
.....
.....

PART THREE: CURRENT WAYS OF REVENUE COLLECTION AND CHALLENGES (PLEASE SELECT)

7. What is the mode of revenue collection by the Chilanga District Council?

a) Manually

[1]

b) Electronically

[2]

c) Both

[3]

d) I do not know

[4]

8. What electronic or digital platforms are currently there to make payments to CDC?

a) Mobile Money

[1]

b) Point-of-Sale or swiping/debit card

[2]

c) Bank Transfer

[3]

d) Specify

[4]

e) I do not know

[5]

9. What revenue do you pay for to Chilanga District Council?

a) Rent

[1]

b) Rates

[2]

c) Specify

[3]

10. How effective is the revenue collection by the Chilanga District Council?

a) Less effective

[1]

b) Fairly effective

[2]

c) Moderate

[3]

d) Effective

[4]

e) Very effective

[5]

11. What challenges does the Chilanga District Council face to collect revenue?

.....
.....
.....
.....
.....
.....

8.1.1.1 *PART FOUR: EXTENT TO WHICH ICT MODEL HAS BEEN ADOPTED IN REVENUE COLLECTION?*

12. Using a rating scale from the lowest point of 1 to the highest point of 5, please select the number that indicates your level of agreement or disagreement with the following statement.

SD = strongly disagree | D = Disagree | N = Neutral | A = Agree | SA = Strongly Agree | NA= Not Application

No	Statement						
Performance Expectancy		SD	D	N	A	SA	NA
1	I think that adopting electronic/digital payment of revenues would improve customer service and efficiency delivery at LCC	1	2	3	4	5	-
2	I think that using electronic/digital payment of revenue would enhance productivity	1	2	3	4	5	-
3	I think using electronic/digital payment of revenue would improve performance and revenue collection level	1	2	3	4	5	-
Effort Expectancy		SD	D	N	A	SA	NA
1	I think that accessing information would be easy and effective at CDC using electronic/digital platform	1	2	3	4	5	-
2	I think it's easy to get services at CDC due to electronic/digital payment system	1	2	3	4	5	-
Social Factors		SD	D	N	A	SA	NA
1	People who influence my behavior think that I should use electronic/digital form to pay revenue at CDC	1	2	3	4	5	-
2	Mobile phones makes it easy to make payment electronically	1	2	3	4	5	-
3	It would be easy to make payments to the CDC electronically because many people own mobile phones	1	2	3	4	5	-

Cultural Factors		SD	D	N	A	SA	NA
1	I have the means required to use electronic payments services	1	2	3	4	5	-
2	I have the knowledge necessary to access electronic payment services	1	2	3	4	5	-
3	Help/guidance is available on accessing electronic payment	1	2	3	4	5	-
4	Online platforms have most of the payment services I need from the CDC	1	2	3	4	5	-
5	I am aware and understand the services/activities that can be offered by LCC	1	2	3	4	5	-
Psychological Factors		SD	D	N	A	SA	NA
1	I have the means required to use the electronic payment services.	1	2	3	4	5	-
2	I have the knowledge necessary to use the electronic payment services.	1	2	3	4	5	-
3	It is my belief and tradition to use electronic payment services.	1	2	3	4	5	-
5	I to use manual payment to CDC I because I have no other choice.	1	2	3	4	5	-

8.1.1.2 *PART FIVE: POSSIBILITY OF ENHANCING ADOPTION OF ICT MODEL FOR REVENUE COLLECTION (PLEASE SELECT)*

13. How long have you been using CDC services facilities?

a) Under 1year

b) 1-2 years

c) 3- 4 years

d) More than 4 years

14. On a monthly basis, how many times do you use CDC services?

- a) Not at all
- b) once a Month
- c) 2-3 times
- d) More than 3 times

15. How frequently do you use CDC for the following services?

Functionality	Never 1	Rarely 2	Sometimes 3	Often 4	Always 5	NA
View Only						
Balance enquiry						
Making a payment/Bills						
Interest rate updates						
For previous information						
Action/Account Control	Never 1	Rarely 2	Sometimes 3	Often 4	Always 5	NA
For historical information						
Bill payments						
Personal Information						

16. Would you prefer to access these service anytime and anywhere at your convenience?

- a) Yes
- b) No
- c) Not Sure

Thank you for your time