INFLUENCE OF VIRTUAL FINANCIAL DATA MANAGEMENT SYSTEM TOWARD VALUE ADDED TAX COLLECTION IN TANZANIA: A CASE OF TRA, DARES SALAAM CITY

BARAKA IBRAHIM PHINIAS

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CERTIFICATION

The undersigned certifies that have read and hereby recommends for acceptance by the Open University a thesis entitled **"Influence of Virtual Financial Data Management System toward Value Added Tax Collection in Tanzania: A Case of Tra, Dares Salaam City",** in partial fulfillment of the requirements for the degree of Master of Business Administration of the Open University of Tanzania.

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Dr. Dionis Ndolage

(1st Supervisor)

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Date

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Dr. Michael Mwacha

(2nd Supervisor)

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DECLARATION

I, **Baraka Ibrahim Phinias,** do hereby declare that this thesis is my own original work, and that it has not been presented and will not be presented to any other University for a similar or any other degree award. It is hereby presented in fulfillment of the requirements for the degree of Master of Business Administration of the Open University of Tanzania.

……..…

Signature

……

Date

DEDICATION

This work is dedicated to my beloved daughter and son Tamarlyn Treasure Phineas and Calvert Wellington Phineas.

ACKNOWLEDGEMENT

I concur with the statement made by British philosopher Jones Allen, who asserted that no duty is more urgent than the duty of returning thanks. Above all, I am grateful to the Almighty God for the health, drive, and faith that sustained me during the process of completing my thesis.

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ABSTRACT

Digital transformation has the potential to significantly increase revenue collection by streamlining procedures, providing better taxpayer services, and raising tax income, which is crucial for funding development and good governance. This study examined three study objectives as follows; to examine the perceived ease of use of the Virtual financial data management system toward the increase in tax collection, to examine the perceived usefulness of the Virtual financial data management system toward the increase in tax collection, and to examine the efficiency of Virtual financial data management system toward increase in tax collection. Data was collected from traders in Dares Salaam using quantitative methodology. A total of 334 surveyed data was analyzed using multiple linear regression analysis. The result shows that perceived ease of use, perceived usefulness, and efficiency have a significant influence on the increase in Tax collection in Tanzania, with an R square of 0.899 and a P-value of 0.000. The study recommends that enhanced tax collection and digital transformation can lead to improved financial performance and enhanced service delivery. The study expands the theoretical understanding of digital transformation and value-added tax collection and provides relevant insights for the government to promote the deep integration of the digital economy with the real economy.

Keywords: *Digitalization, Trade, Virtual financial data management systems (VFDMS), Tax revenue (VAT)*

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LIST OF ABBREVIATIONS AND ACRONYMS

CAG	Controller and Auditor General
EFDs	Electronic Fiscal Machines
eRCS	Electronic Revenue Collection System
ePGs	Electronic Payment Gateway Systems
E – Government	Electronic government
E – Invoice	Electronic Invoice
EFDMs	Electronic Financial Data Management system
ETI	Electronic Tax Invoice
GNP	Gross National Product
GDP	Gross Domestic Product
ICT	Information and Communication Technology
ITA	Income Tax Act
LGRCIS	Local Government Revenue Collection and Information Systems
MBA	Master of Business Administration
NBS	National Bureau of Statistics
OECD	Organization for Economic Co-operation and Development
PAYE	Pay as You Earn
RBV	Resource Based View
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TRA	Tanzania Revenue Authority
TOE	Technological Organization Environment

TRAM	Tax Reasoning Action Model
URT	United Republic of Tanzania
VFDMs	Virtual Financial Data Management Systems
VFD	Virtual Fiscal Device
VAT	Value Added Tax
TPDF	Tanzania Peoples Defense Forces
DUCE	Dares Salaam University College of Education
CPA (T)	Certified Professional Accountant of Tanzania
MCMS	Military College of Medical Sciences
CNS	Chief of National Services

CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE PROBLEM

1.1 Overview

This chapter introduces the background of the problem, statement of the problem, general and specific objectives of the study, general and specific research hypothesis, significance of the study, scope of the study, limitation of the study and organization of the study.

1.2 Background of the Study

Worldwide, tax collection is used as a major tool for attaining economic development and long-term growth of the governments (Eilu, 2018 & Chambi, 2020). Moreover, in most of developing countries, Tax revenue is used to reduce dependence on donor assistance and provision of social services (Komanya, 2016). Eilu (2018) revealed that, tax revenue collection in many Sub-Saharan African countries is still less than expected. Reasons for lower tax collection were highlighted by Cornel (2017) such as corruption and poor methods of tax collection. Consequently, many governments decided to improve their tax collection by improving Value Added Tax (VAT) collection through the use of Virtual Financial Data Management System (VFDMs) (Eilu. 2018).

In order to increase government revenues from tax, Tanzania like many other developing country governments decided to adopt Electronic Fiscal Devices (EFDs) so as to improve the collection of tax (Chambi, 2020). The use of EFD devices in VAT collection has been commended for its effectiveness in tax collection exercise

(Kitilya 2011). It was reported by Karongo (2014) that year after year the collection of the revenue has been growing due to the increased enforcement as well as sensitization to the use of Electronic Fiscal Machine; Example after introduction of electronic fiscal device, four years later, VAT shoot up to 73% collections of revenue in Tanzania.

Despite the use of EFDs to stimulate the increase of revenue collection in Tanzania the target has not been reached, thus in 2021, TRA came up with new technology of revenue collection by using virtual billing payments systems where by a taxpayers use smart gadgets like smartphone, scanners and laptops to access the billing payments receipt direct from TRA (TRA, 2021).

According to the illustration made by an OECD Forum on tax Administration guidance note focusing on Compliance risk management, progress with the development of internet search tools for tax administration in 2000's, The speed of digital adoption and transformation across every aspect of society raised significant challenge for government, In recent decades there was progression to electronic government (e-government), which can be broadly defined as an adoption of new technologies in every aspect of government activity; Tax administration has often been at the forefront of change, simply because technology has supported improvements in efficiency, productivity, effectiveness, simplicity and fairness in a highly cost constrained environment (OECD, 2017).

Under the impact of the interaction and change of modern information technology, Virtual Financial Data Management System (VFDMs) has entered more and more

into field of tax collection and administration and digital tax management have gradually become the development trend of tax collection and administration. VFDMs technology is indispensable forces to improve the ability of tax collection and administration. With the development of ICT, there have been many virtual electronic payment and tax forms on the network and the process (TRA, 2022).

Through the use of VFDMS the buyer and seller can be able to access their sales and purchase records and VAT returns to TRA by printing digital receipts this is substation of EFDs billing receipts systems which printed paper receipts. VFDMS are computerized application used by tax bodies to monitor the business transactions of each registered business. This application can be used in Electronic Cash Register (ECR) which is a point-of-sale terminal that records information from barcode scanners, weighing sales and credit and debit card machines. Another form which can use VFDMS is in electronic tax register (ETR) this calculates the tax value for every transaction made and stores this information in permanent memory that can only be accessed by tax TRA and sent back transaction information through digital receipts in smartphone or Tablets of the final client (TRA, 2022).

The VFDMS system requires every taxpayer to issue fiscal receipt or fiscal invoice for every transaction made in the process of doing business on goods and/or services. The objectives of introducing this system were first, to increase the collection of value added tax revenue by capturing a wide range of transactions in the supply chain and second to obtain tax payers‟ information regularly – typically overnight by, for instance, requiring submission of z-report. The collection of information is

not only important for value added tax revenue collection but also important for income tax assessment at the end of tax year for each taxpayer (Mandari *et al.*, 2017). With the application of the Technology Acceptance Model which requires the user of the technology to willingly accept the introduced technology and use it effectively and efficiently, the increase in tax revenue is of no doubt (Hou, 2014).

The introduction of Virtual financial data management system in Tanzania is a step forward to empower Tanzania Revenue Authority to accurately obtain sales information from taxpayers, reduce cost of tax collections and improve tax compliance (Ikasu, 2014 & Mboma, 2012). The introduction of Virtual financial data management system is not only advantageous to tax administrations alone but also advantageous to taxpayers. At the time the Virtual financial data management system is effective, taxpayers may have the affairs of their business formally managed by firstly, comply with all legal requirements and secondly, keep and share proper and correct information with tax administrations and thus minimize compliance and tax risks to a greater extent. Since the introduction of virtual financial data management system, little is known about the extent to what has been contributed in improving value added tax in Tanzania. It is from this ground; this study was conducted to examine the influence of virtual financial data management system on the efficiency of tax collection among taxpayers in Tanzania.

1.3 Statement of the Problem

The collections of revenue through taxation are still below its potential despite the adoption of technology of electronic tax administration management (Eilu, 2018;

Lyimo & Makilu, 2022). Statistics show that Tanzania government revenue was over 21.7 trillion Tanzania shillings (Approximately 9.4 billion US dollars) in 2020/21. TRA further informed the public that during the three quarters from July 2021 to March 2022 of the financial year 2021/22 it has collected TZS 16.69 trillion equivalent to 97.3% of the target of TZS 17.15 trillion. This is an increase of TZS 3.1 trillion or 22% compared to the collection of 13.59 trillion collections during the similar period of the financial year 2020/21. In addition, in March 2022, TRA has collected TZS 2.06 trillion out of the target of collecting TZS 1.98 trillion, with an efficiency of 103.6% and a growth of 23.17% compared to March 2021 when it collected TZS 1.67 trillion. TRA notes these collections are largely contributed by decreased tax evasion, strengthening the relationship between the TRA and the taxpayers and the resolution of out of court tax disputed as well as the timely handling of taxpayer's complaints (TRA,2021).

In spite of this recent success and commendable efforts made by the government in improvement of e-government, TRA still faces some challenges like frauds, lack of tax payers education on using smart gadgets and digital technology to the taxpayers in other sub urban tax regions and centers. TRA losses of their digital revenue collections of taxes. TRA believed that there is still need to increase the level of collections by strengthening the rate of voluntary tax payment for taxpayers, increase efficiency, intensive use of an improved Virtual electronic financial data managements system in tax collections, monitoring and mobilization of the issuing of VFDMs technology which will in largely enhance the achievement of the target of level of revenue collections which has not yet reached.

A number of authors have been extensively studied the impact of EFD machines on revenue collection, Value added Tax collection and its impact on improving revenue collection (Chege, 2010; Taye, 2011; Pandu, 2012; Weru *et al*., 2013 & Mandari *et al.,* 2017 & Mathayan, 2020). However, little is known on the influence of VFDMs technology on the increase of Value Added Tax (VAT) collection in Tanzania. Thus, this study investigated the influence of the adoption of Virtual Fiscal Data Management Systems (VFDMs) in the increase of VAT collection in Tanzania.

1.4 Research Objectives

1.4.1 General objective

The general objective of this study is to determine the influence of virtual fiscal data management system towards value added tax collection in Tanzania.

1.4.2 Specific Objectives

i. To examine the perceived ease of use of Virtual financial data management system toward increase in tax collection in Tanzania
ii. To examine the perceived usefulness of Virtual financial data management system toward increase in tax collection in Tanzania
iii. To examine the efficiency of Virtual financial data management system influence in increase tax collection in Tanzania.

1.5 Research Hypothesis

Ho-1 Perceived ease of use does not influence traders to use Virtual financial data management system in tax collection in Tanzania

H-1 Perceived ease of use does not influence traders to use Virtual financial data management system in tax collection in Tanzania.

Ho-2 Perceived usefulness does not influence the use of virtual financial data management system in increase tax collection in Tanzania.

H-2 Perceived usefulness does not influence the use of virtual financial data management system in increase tax collection in Tanzania.

Ho-3 The efficiency of virtual financial data management system does not influence tax collection in Tanzania.

H-3 The efficiency of virtual financial data management system does not influence tax collection in Tanzania.

1.6 Significance of the Study

The findings of this study are expected to improve efficiency and effectiveness of VFDM system on enhancing the collection of revenue particularly in Sub urban tax regions, Municipals and cities of Tanzania. This study has important insinuations for academics as well as practitioners and regulators. This thesis contributes to the already existing literature on tax compliance by documenting that the adoption of a Virtual tax payment system is a partial mediator in the relationship between attitude towards digital tax system and tax compliance. Government through tax authorities may wish to improve tax compliance by sensitizing taxpayers about the benefits of

virtual billing tax systems which may positively change taxpayer's attitude towards digitalized tax system and embrace the system and thus tax compliance.

1.7 Scope of the Study

This study was conducted in Dar es Salaam region because it is the largest commercial, industrial city and harbor of the United Republic of Tanzania. Administratively, Dar es Salaam region is divided into five municipalities namely Temeke, Ilala, Kinondoni, Ubungo and Kigamboni. The three municipalities tax regions of Temeke, Ilala and Kinondoni which are geographically located in such a way that each municipality radiates from the city center to the outmost outskirts of the city. So, the heterogeneity of the city assisted the researcher to get valid and genuine data. The study population of this study includes all traders (tax payers) three municipalities tax regions and TRA managers from headquarter offices in Dares Salaam. It contains almost all kind of businesses, the core business being services oriented like hotels, wholesales, retails, liquor stores, supermarkets, spare parts, hardware to mention a few, the study was to determine the availability of Virtual billing system application (Smart gadgets) to the taxpayers and examine both administrative and environmental challenges facing the use of Virtual billing system at different markets.

1.8 Organization of the Study

This thesis comprises of five chapters. The first chapter includes background of the problem, the statement of the problem, objectives of the study, research hypothesis, significance of the study, scope of the study, and organization of the study. The

second chapter presents literature review and research gap. The third chapter presents research methodology to be used in the study which comprises of the research approaches, research design, area of the study, study population, sampling frame, sample size, unit of analysis, sampling techniques, inclusion and exclusion criteria, data collection sources, data collection methods, data management and analysis, validity and reliability and ethical issues of the study. Fourth chapter present findings and discussions and fifth chapter include conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter entails the literature review relating to the topic under study. The chapter provides the theoretical literature review, empirical literature review which relates with the influence of VFDM system, collection of VAT as well as conceptual framework to guide the study.

2.2 Definition of the Key Terms

This section defines the key concepts used in the study; these concepts include Tax, Tax collection.

2.2.1 Virtual Financial Data Management System

Virtual financial data management system refers to a new generation online cash register substitute of electronic fiscal billing receipts designed for issuance of fiscal digital receipts by taxpayers for every sale through online and signed by the tax administer server in real time. (TRA,2021). In this study, the VFDM system is used as a vital system which aids the collection of tax.

2.2.2 Value Added Tax (VAT)

A value-added tax (VAT) is an indirect consumption tax levied on goods and services at each stage of production or distribution processes from labour and raw materials to the sale of final consumable products or services (Tait, 1988; Schenk et al., 2015). In this study, VAT is chargeable on all taxable goods and services

supplied in or imported as well as immovable property of any economic activity into the United Republic of Tanzania.

2.3. Theoretical Literature Review

2.3.1 Technology Acceptance Model (TAM)

In 1989, Fred Davis used technological acceptance model to explain computer usage behavior to explain the general determinants of computer acceptance that lead to explaining users' behavior across a broad range of end users computing technologies. The basic TAM model included and tested two specific beliefs perceived usefulness and perceived ease of use, the finding of both perceived ease of use and perceived usefulness found to have a direct influence on behavior intention, thus eliminating the need for the attitude construct these are the organism that represents the motivation to use the system that leads to consumers respond to use the system.

Technology Acceptance Model (TAM) was developed from the Theory of Reason Action (TRA), in order to explain an individual's information technology acceptance behavior. TAM model describes how the customer comes to accept and utilize an innovation. TAM has become well-known as a vital, influential, and parsimonious model for foretelling user acceptance behavior (Venkatesh & Davis, 2000). The TAM was specifically developed to explain user acceptance of IS or Information Technology (IT) (Hou, 2014). The major aim of TAM is to scrutinize why users' attitudes and beliefs influence their acceptance or rejection of information technology. TAM intends to provide a description of the determinants of the adoption and use of information technology. The model aims at understanding the

causal relationships among users' internal beliefs, attitudes, and intentions as well as to predict and explain acceptance of computer technology (Davis *et al*., 1989).

Behavioral intention is determined by both the user's attitude and its perception of usefulness. The user's attitude is considered to be significantly influenced by two key beliefs, perceived usefulness and perceived ease of use. Perceived ease of use refers to users who believe that technology would ease their physical and mental effort to when performing their job (Davis, 1989). This attribute is one of the major behavioral beliefs that influence the intention of users to adopt information technology in conventional or other modified Technology Acceptance Models. Perceived usefulness (PU) refers to a user's subjective probability that using a different system or technology increases his or her job performance (Davis, 1989).

Therefore, a system that is high in perceived usefulness in the context of the adoption of the information system is the belief that it would bring positive results from its use. Some studies have shown that perceived usefulness directly affects the readiness to adopt new technology, including the process of digitalization. Consequently, many users find that if the system is useful to them, they will adopt the system and use the system (Saruji & Hamid, 2020).

The TAM is a widely accepted and cited model which has been used successfully to predict system use and its continued popularity in technology adoption research evidences its overall explanatory power and measurement validity in various empirical environments (Pierce *et al.*, 2014). Therefore, in this study, TAM was used

to measure the technology acceptance of VFDM system by traders which is likely increase the collection of tax.

Although the TAM does not have any external variables it has been sufficient to aid managers understanding the drivers and determinants of user acceptance, and in developing strategies to improve user acceptance of new systems (Emaeilzadeh, 2016; Verma & Sinha, 2016). The TAM has been used successfully in a variety of studies to examine the factors affecting user acceptance of technologies such as assistive technologies for people with disabilities, electronic banking, knowledge conversion, online auctions, e-learning, internet use and others (Yoon, 2016; Nasser Al-Suqri, 2014). In this study, the TAM was used to provide guidance and insight about the impact of VFDM system on the collection of VAT. The main advantages of TAM are its flexibility, adaptability and logical soundness, making it the most widely recognized model at the moment (Prieto *et al*, 2015).

2.3.2 Contribution of the theory to the Study

Development of technology adoption models and theories based on the literature review encompass different views and interpretations. The literature review shares the difference of technology adoption models and theories with different theoretical insights, research problems, variables and measurements. The development of the new theoretical research framework will depend on a number of factors but limited to the following the research hypothesis and objectives, gap analysis, the target market (users and developers) understanding is vital to enable the theory and practical aspect of the technology adoption models and theories. This review has shed some light and

potential applications for technology applications for future researchers to conceptualize, distinguish and comprehend the underlying technology models and theories that may affect the previous, current and future application of technology adoption.

2.4 Empirical Literature Review

This part presents empirical literature review. Empirical review was done basing on the three research specific objectives as the same approach was adopted by Chen (2020). The review consists of review of Perceived ease of use, Perceived usefulness, and the efficiency of VFDM system and VAT collection. After empirical literature review on each specific objective the null (H_O) is stated. The null hypothesis (H_O) assumes that samples really come from the populations (Adjognon *et al.*, 2017).

According to the study by Ndunda *et al*. (2015) established a marginal relationship between tax compliance and revenue collection, which was true in the present study. This agreed to the study by (Kaburia,2004), which found out that lack of suitable e-Payment alternatives was a critical challenge to the growth of e-commerce in Kenya. An e-Payment model suitable for individuals in Kenya was proposed. Therefore, the practice of e-payment and increase in revenue collection performance among the consumers and its usage show the high acceptance level of the e-payment system. The increases in the non-cash transactions reflect the increases in acceptance of e-payment system among consumers in Kenya.

The review of the above-mentioned items is done is section 2.4.1-2.4.3 below.

2.4.1 Perceived ease of use of VFDM system by Traders

Perceived ease of use is also prominently featured in user acceptance literature. Researchers consistently agree that Perceived ease of use is an important factor in examining and assessing user acceptance of novel technologies (Shahrabi *et al*., 2014). Moslehpour *et al*., (2018) explained Perceived ease of use in terms of a user finding a technology more favorable than another for use, making it more likely to be approved by the user. Therefore, the less complicated a technological application is perceived to be, the more likely (Moslehpour *et al.*, 2018) users use it. Thus, ease of use and simplicity are key ingredients in IT acceptance (Sanitnarathorn, & Prajaknate, 2018).

According to the study done by Sandema-Sombe (2019) experience was found playing a major role in determining the ease of use of the system. It was argued that beginners or novice users are more likely to encounter difficulties interacting with new technology and are more likely to report it. Similarly, Kira (2016) valuated the taxpayer's perceptions on the use of Electronic Fiscal Devices (EFDs) by analyzing the benefits of using EFDs in revenue collection; EFD opinions and problems from taxpayers' perspectives. The results reveal that the majority of taxpayers cite the use of EFDs machines in revenue collection as a benefit to their bottom line. Using EFDs has speed up the preparation of sales reports, secured tax information for auditing purposes, and ensured that taxpayers pay the correct tax rate.

Nabe *et al.* (2010) carried out a study examining various reasons for the adoption of electronic tax payment systems. With regards to this therefore the most mentioned

reasons that lead to the adoption of electronic tax payment systems were to secure sales information and also enhancing tax compliance. More over the study found that electronic tax payment system was introduced with the purposes of reducing fraud in Kenya which was at higher peak in the country.

Finally, it was proposed by the study that the use of effective machines in tax collection would solve the daily misunderstanding existed for a long time between the tax payers and the government. This study assumes that perceived ease of use influence traders to use VFDM. This takes us into the first research hypothesis; Ho-1 Perceived ease of use does not influence traders to use VFDM system.

2.4.2 Perceived Usefulness (PU) of VFDM System to Traders

Literature stemming from the fields of management science, operational research, and informatics (Comer, Gibson, Zou, Rosenman, & Dixon, 2018) use PU to understand end-user perceptions of the usefulness of IS. For example, Moslehpour, Pham, Wong, and Bilgiçli (2018) found the advantages of online shopping versus traditional in-store shopping to users contributed to the users PU of online shopping.

The study of Lukumay (2017) aimed at assessing the perception and attitudes of the Taxpayers on the use of Electronic Fiscal Devices (EFDs) in Tanzania. Study findings indicate that VAT income has increased since EFDs were introduced. Numerous tax payers now have access to tax services thanks to EFDs, according to the study. The tax collecting gadgets are reusable and dependable. The high expense of acquiring EFDs and the fact that taxpayers aren't properly educated about the usage of EFDs are two of the biggest obstacles to complete EFD adoption.

Nyasha *et al.* (2012) discovered that employees with poor educational levels find it difficult to utilize fiscalized electronic gadgets Olva Academy – School of Researchers, Volume 4, Issue 1, March 2022. pp 96 - 104 since they lack knowledge on how to use them effectively. Employees also had a negative perception of the usage of fiscalized electronic devices since they were unaware of the approach and others were just reluctant to change, which means that even if given all of the resources, they would refuse to utilize the advanced way.

Nkote&Luwugge (2018) studied the effect of automation and customs tax administration in the case of Uganda. Automated tax administration and revenue collection were typically anticipated by automation, while clearance time was negatively predicted. This indicates that the expense of tax administration grew as automation increased, but the time required to process tax filings decreased as Uganda Revenue Authority's computerization increased (URA). However, due to insufficient automation of all systems, URA was able to achieve computerization of customs tax administration at a cost that increased over time, the gadget malfunctions, requiring users to transmit data to URA to empty fiscal memory.

Weru *et al.* (2016) worked on the effect of the change caused by implementation of the ETR project and if the ETR system enhanced the tax collection in Nairobi. The ETR system was determined to have improved tax collection in Nairobi's commercial premises and to have helped close tax evasion loopholes to a significant extent. Stakeholders have yet to be properly taught on the usage of ETR machines. Tax compliance has also improved as a result of the system's implementation. The Kenya

Revenue Authority (KRA) system has failed to completely institutionalize the system. Martin *et al*. (2020) study aimed to assess the effectiveness of ETRs in the processing of VAT returns. Researchers wanted to know how much people were utilizing electronic tax returns (ETRs), what issues they were having using them, and what remedies could be available. Over the previous four decades, many parts of the Kenyan economy have changed, but it has also had to deal with the usual issues that beset emerging nations' tax systems.

There are several reasons why monthly VAT returns are submitted on time. ETR is one of the variables that contribute to this. In addition, the implementation of ETR has allowed the firm to reduce the expenses associated with processing VAT. Thirdly, ETRs have improved revenue collection as a consequence of sound sales and stock audits, according to the research. ETRs were judged to be cost-effective and beneficial to the firm when it came to filing out VAT returns at regular intervals, according to a fourth study. They also discovered that ETRs don't break down very often, according to the researchers. This takes us into hypothesis two; Ho-2 Perceived usefulness does not influence the use of VFDM system to traders in Dar es Salaam.

2.4.3 The Efficiency of VFDM System and VAT Collection

Mohammed & Gela (2017) studied the challenges of electronics tax register machine (ETRs) to businesses and its impact in improving tax revenue. The adoption of E-tax resulted in more timely filing of monthly VAT returns. Due to the difficulty with ETR suppliers, tax payers were faced with unallowable costs and a lack of

consistency and transparency in applying penalties on tax professionals. Taxpayers also complained about maintenance expenses and time, as well as greater compliance expenditures.

(Lubua ,2017) conducted a study aimed to show how e-transparent services address the challenge of voluntary tax compliance by SMEs in the Republic of Tanzania. The following characteristics were identified as having an impact on voluntary compliance in the study: knowledge of tax rules, company experience, employee honesty, low frequency of digital tax education, capacity building and training environment. As a consequence, the ability of taxpayers to voluntarily file their tax returns will be increased if the Revenue Authority uses appropriate ICT tools.

Moulder (2005) revealed that majority of the county governments offer online payment of utility bills, fees and fines. Moreover, the study found that there are more and many factors hindering adoption of electronic tax payment systems which include lack of IT staff, security issues, convenience and financial constraints. On the other hands the study conducted by Kaburia (2004) observed that lack of suitable electronic payment means was a major challenge to the growth of electronic commerce in Kenya.

Esther (2014) carried out a study in Tanzania discussing the use of electronic tax payment systems on tax collection and its challenges. In order to gather the relevant information of the study primary and secondary data collection methods were used. The results from the study observed that electronic tax payment system face a lot of

challenges that hinder the effective implementation and the use of electronic tax payment devices. However, the most mentioned challenges include the breakdown of the system, higher costs for the purchase of electronic tax payment devices. Finally, it was recommended by the study that all the tax payers and tax collectors have to be trained and given education relating to the importance and the use of electronic tax payment systems.

Nyasha *et al,* (2012) unveiled that electronic tax system has a beneficial influence on Sthe automotive sector by improving tax collection, saving time, and minimizing corruption. As a result of their lack of knowledge, personnel with a poor educational level have difficulty using fiscal technological equipment. They are unaware of the approach and others are reluctant to change, therefore they will not adopt the advanced way. This takes us into hypothesis three. The efficiency of VFDM system does not influence VAT collection in Dar es Salaam.

2.5 Research Gap

Gap is observed in the model guiding this study which is Technology Acceptance Model (TAM), the model was criticized that Technology adoption behavior is impacted by the unique characteristics of its users (Emaeilzadeh, 2016). The current study uses both the characteristics of the VFDM system user and the efficiency of the system to predict the impact of the VFDM system on tax collection.

Furthermore, on the reviewed literature, some of the researchers have based on exploring the challenges of electronics tax register machine (ETRs) to businesses and

its impact in improving tax revenue, challenges of voluntary tax compliance, factors hindering adoption of electronic tax payment systems, challenges on the use of electronic tax payment systems on tax collection, for instance the studies conducted by Mohammed & Gela (2017), Lubua (2017), Moulder (2005) and Esther (2014).

All these studies did not include the user's perception of the technology and efficiency of the technology, instead their works concentrated on the outcome of the technology. Thus, the present study examining the impact of the VFDM system by looking the perception of traders on the system, whether the system is easy to use and or useful to perform their needs, together with the proficiency of the system.

2.6 Conceptual Framework

This is used to show partial mediation of the relationship between independent variables (Perceived ease of use, perceived usefulness of virtual financial data management system and efficiencies of virtual financial data management system) and dependent variables (Value added tax collection). The conceptual framework explained the main issues under the study in either graphically or in a narrative form Herbermann (1994). Conceptual framework the mediating path analysis for efficiencies of Digitalized tax payment system.

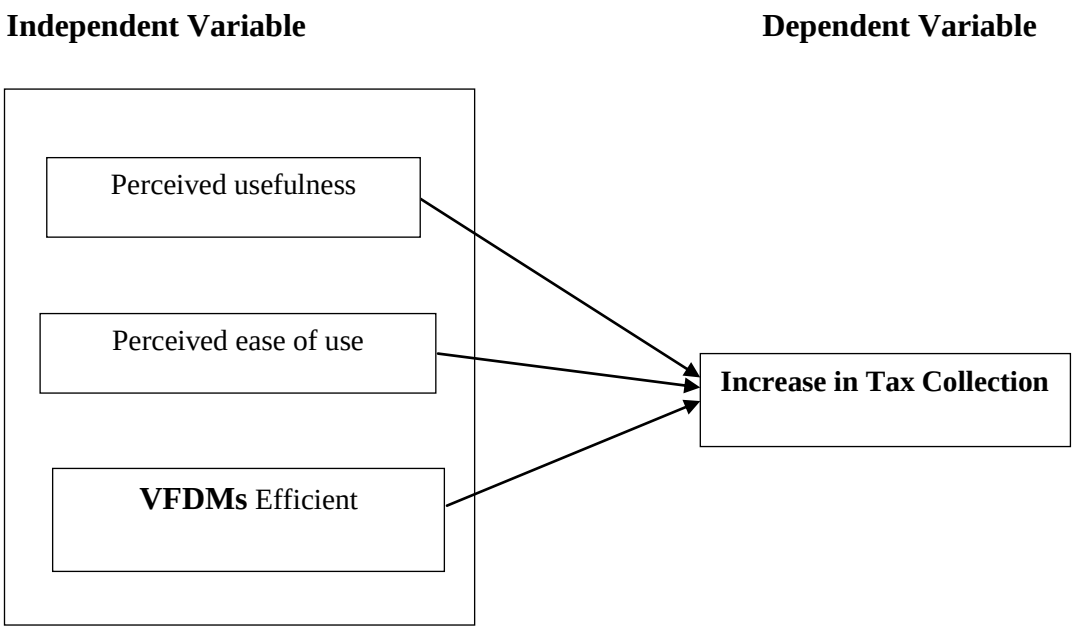

Figure 2.1 Conceptual Framework

Source: Researcher construct (2023)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents and discusses the methodology of the study. The chapter addresses methods and procedures which was used in this study. It shows how research methods in chapter one and two were approached, and how the data were approached and analyzed. It exclusively contains approach of the study, study area, study population, target population, study design, tools and techniques for data collection, method for data collection, unit of the study, sample size, sampling procedure, data collection and quality control, data entry and cleaning, data variable and analysis and ethical consideration.

3.2 Research Philosophy

The selection of research approach and methods affects both the validity and outcomes for the research. As it is stated by (Silverman, 2006) that, concepts, models and methodologies cannot be correct or incorrect, only more or less constructive. There are two major research paradigms (positivism and interpretivism) in literature; these paradigms or approaches are associated with quantitative and qualitative methodologies respectively (Silverman, 2000; Lewis, 2003; Hammersley, 2013; Cohen, Manion & Marison, 2011). Hence the research philosophy of this study its positivism paradigm because the study is quantitative approach in nature.

Positivism paradigm is a methodological philosophy in quantitative research which applies the methods of natural science to discover the study of social sciences.

Quantitative studies examine social events by means of measurements and analysis of causal relationships between variables in a manner that leads to the discovery of objective reality (Hammersley, 2013; Cohen, Manion & Marison, 2011). Quantitative research deals with quantitative data expressed in numbers (Cohen, Manion & Marison, 2011).

3.3 Research Approach

This study aims to examine the influence of virtual financial data management systems (VFDMS) on value-added tax (VAT) collection in Tanzania, specifically in Dares Salaam City. The research uses a quantitative approach to measure the perceived ease of use, usefulness, and efficiency of the VFDM system to traders in Dares Salaam. This study argues that the quantitative data is essential for addressing the causal-effect relationship between VFDM and VAT collection.

3.4 Study Design

The study aimed to assess the perceived ease of use, usefulness, and efficiency of the VFDM system among traders in Dar es salaam, Tanzania using a cross-sectional survey design. The explanatory cross-sectional survey research design was used to analyze trader attitudes and attributes on the perceived ease of use and usefulness of the VFDM system. This cross-sectional approach provided a quick, efficient, and accurate means of assessing information about the study population, ensuring a comprehensive understanding of the system's effectiveness in the market. This design was assisted in answering the “what” questions. The view shared by Saunders, Lewis, and Thornhill, (2009) when they argued that, survey strategy is

most frequently used to answer “what” questions. Further, the design helped the researcher to collect data at a single point in time.

3.5 Study Area

This study was conducted in Dar es Salaam region because it is the largest commercial, industrial city and harbor of the United Republic of Tanzania. Administratively, Dar es Salaam region is divided into five municipalities namely Temeke, Ilala, Kinondoni, Ubungo and Kigamboni. The three municipalities tax regions which are geographically located in such a way that each tax region municipality radiates from the city center to the outmost outskirts of the city. So, the heterogeneity of the city assisted the researcher to get valid and genuine data. The study population of this study includes all traders (tax payers) in three tax regions municipalities and TRA managers from headquarter offices in Dares Salaam. It contains almost all kind of businesses, the core business being services oriented like hotels, wholesales, retails, liquor stores, supermarkets, spare parts, hardware to mention a few.

3.6 Population Size

According to Creswell (2015), population refers to the total number of items investigated in a scientific study. According to Kothari (2013), it refers to a collection of events, things, and people with common characteristics. In this study, population of the study include traders in Dar es salaam region. Following TRA report of February, 2023 the registered trades using VFDM are 498 Kinondoni, 732 Ilala, 402 Ubungo, 512 Temeke, and 390 Kigamboni. In the process of selecting a sample **(*n*)** of traders from this population of 2,534 traders;

3.7 Sampling Frame, Sampling techniques and Sample Size

3.7.1 Sampling Procedure

Sampling procedure is the act, process, or technique of selecting a suitable sample or a representative part of the population determining permanent or characteristics of the whole population (Kombo & Tromp, 2006). For the purpose of this study the following sampling procedures was used.

3.7.1.1 Stratified Random Sampling Techniques

This study used stratified random sampling technique. There are three types of stratified sampling techniques: optimum allocation, disproportionate and proportionate (Kothari, 2004). This study used optimum allocation stratified random sampling technique. This type was used as it is inclusive and representative than other stratified sampling techniques. This method enabled the assortment of items from each stratum. Stratified sampling technique is the type of probability sampling technique. The technique aims at getting interested strata **(**groups**)** in the population (traders) particularly basing on business type. The stratified random sampling technique was guiding the researcher to categorize the population of traders into strata on the basis of the nature of the business. The categories were comprised of large business, medium business and small business. In the end, a predetermined number of units was taken from each strata using simple random sampling technique. Stratified sampling was used in this study as it provides an equal chance of selecting traders. It was used as there is a complete list of traders of the population.

A number of procedures were followed when doing stratified random sampling technique. The first step was classifying the population (traders), then choosing the

appropriate stratification (trade type); listing the population; listing the population according to the chosen stratification; choosing the sample size; calculating a proportionate stratification; and using a simple random sampling technique to select the sample. Traders were divided into three group's these include; small trade, medium trade and large trade. Then a consecutive number was assigned from 1 to a particular number to each trader in each stratum.

Finally, it ends with three lists, one list detailing for each category of given trader. The formula of Kothari (2004) used in this study gave 334 traders as a required sample size. This were followed by selecting trader from each identified three strata using simple random sampling technique.

3.7.2 Sample Size

Generally, a sample were selected basing on the population of registered trades using VFDM in Dar es Salaam. The total population of the registered trades using VFDM is 2,534 (TRA, 2023). In the second stage, a sample population of respondents (Traders) was obtained. The selection is based on the figures which consist of traders using VFDM in Dar es Salaam. The formula (Kothari, 2004) below was used to calculate the sample size as:

$$n = \frac{Z2pqN}{e^2 (N-1) + Z^2pq}$$

Whereas:

n: the sample size for a finite population

N: size of population which is the number of Traders (2,534)

P: population reliability (or frequency estimated for a sample of size n), where p is 0.5 which is taken for all developing countries' populations and p + q= 1

e: The margin of error considered is 5% for this study

Z α/2: normal reduced variable at 0.05 level of significance Z: is 1.96

According to the above formula, the sample size for this study is:

$$n = \frac{(1.96)2\ 0.05x0.05x2,534}{(0.05)^2\ (2,534 -1) + (1.96)^2\ x0.05x0.05}$$

$$n = \frac{(1.96)2\ \ 0.05x0.05x2,534}{(0.05)^2\ (2534-1) + (1.96)^2\ x0.05x0.05}$$

n=334

Using the formula above, 334 traders were obtained as a sample size for traders using VFDM. Therefore 334 respondents were used as the minimum sample size for this study.

3.8 Questionnaire

The study used questionnaire to collect information from traders on perceived eases of use, perceived usefulness and effectiveness and efficiency of VFDM. Open ended and closed ended questionnaire was used in data collection as one of the primary sources of data, the fact that questionnaire could be answered in the absence of the researcher control and supervision hence respondents was free to express themselves without any influences from the researcher.

The research adopts self-administered questionnaire where by questionnaires were filled by (334) traders in Dar es Salaam. This study uses both open ended questionnaire and closed ended questionnaire to the respondent in order to give the respondents chances to provide their explanations, opinions, ideas and views about the problems and topic under discussion. The research was conducted using both open ended questionnaire and closed ended questionnaire because it is most effective method of data collection and gives respondent freedom of writing information relating to the impact of VFDM also it was gave comfort ability to the respondent to answer questions by writing anything in relating to the topic because some people can feel uncomfortable to answer some questions by using interview thus questionnaire were used so as to make respondents comfortable, questionnaire methods of data collection also allows collection of enough information from respondents since respondents were free to tell out all information of their understanding on impact of VFDM. Questionnaire is a simple method of collecting enough information and is costless means.

3.9 Validity Issues

The researcher carefully designed various research techniques, methods, and strategies to ensure the validity and reliability of quantitative data, ensuring accurate and consistent results that reflect multiple ways of establishing truth, and that are appropriate for the nature of the topic.

3.9.1 Independent Variables Measurement

In the current study, the independent variable is the impact of VFDM system use in doing transactions. This variable was measured by looking at three things, the

perceived ease of use of the VFDM system, the perceived usefulness, and the efficiency of the VFDM system in the collection of tax. The measurement of these variables comprised some items modified on the context of this study as shown in table 3.1: -

Table 3.1 Variables Measurement

Construct	Operational definitions	Measured items
Perceived ease of use	Perceived ease of use refers to users who believe that VFDM system would ease their physical and mental effort to when doing transaction.	PEOU 1: Using the VFDM system in my job would enable me to accomplish tasks more quickly PEOU 2: I would find it easy using VFDM system to do what I want it to do PEOU 3: It would be easy for me to become skillful at VFDM system PEOU 4: I would find VFDM system to be flexible to interact with PEOU 5. My interaction with VFDM system would be clear and understandable
Perceived usefulness	Perceived usefulness (PU) refers to a user's subjective probability that using a VFDM system will increase his or her transactions	PU 1: VFDM system will enable trader to get clients' transactions very quickly PU 2: The VFDM system will help traders to follow up transactions from outside the business PU 3: VFDM system is useful in retrieval of information from clients PU 4: VFDM system will save time of traders
Efficiency of the VFDM system	Efficiency of the VFDM system (EV) refers to the quality of VFDM system being able to do a task successfully, without wasting time.	EV 1: The VFDM system does not have any problem with performing each transaction EV 2: The level of efficient performing decreases during the day EV 3: Its performance on the terrain field (heavy loads) is efficient and predictable EV 4: It stores all information done as required.

Source; Field Data (2023)

3.9.2 Dependent Variables Measurement

In the current study, dependent variable is the increase in Tax collection in Dar es Salaam. This variable was measured by collecting VAT tax collected for consecutive five years from Ilala, Kinondoni and Temeke tax regions in Dar es Salaam.

3.9.3 VAT collection in Dar es Salaam

This section presents the results based on VAT collection in Dar es Salaam. The results are presented in table 4.5. The results are for three tax regions in Dar es Salaam (Ilala, Kinondoni, and Temeke) Whereby the collection was combined from tax regions such as (Ilala and Kariakoo tax regions),(Kigamboni and Temeke) and (Ubungo, Tegeta, and Kinondoni tax regions) according to TRA. The findings show that in 2022/2023 the VAT collection increased compared to 2020/2021. Further, there was an increase in VAT collection every year as depicted in Table 3.2

Table 3.2: VAT Collection in Dar es Salaam for five years

TZS Billion/ 000,000,000	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
Ilala	821,107.2	921, 101.1	931,107.2	1,073,667.8	1, 307,553.0
Kinondoni	567,327.1	689,671.0	767,467.1	753,638.0	925,348.2
Temeke	210,503.4	255,598.5	297,503.4	340,598.5	396,803.3

Source: TRA (2023), Dar es Salaam

3.10 Data Analysis

The data were analyzed using SPSS and then presented using descriptive statistics, reliability tests (Cronbach's alpha), diagnostic tests, and regression analysis tests such as ANOVA (F-test) and t-test. Before Data analysis Homoskedasticity was tested using graphical technique involving a scatter plot of residuals; normality was tested using visual

plots for each variable; linear relationships was tested using normal probability plots; independency was tested using Durbin-Watson statistic; Information collected through questionnaire from traders was coded from text into numerals and entered into MS excel by double entrants and later clean to remove errors in terms of accuracy, consistence, and responses. Each possible answer was assigned number to ease the determination of quality of data during the whole process of data entry and cleaning. Lastly, the data was entered into a computer, checked for errors, and analyzed using SPSS version 21. Cross tabulation, regression analysis, and descriptive statistics like chi-square test, multiple regression, and frequencies and percentages were performed, with the information presented in tables and figures.

3.11 Ethical Considerations

A researcher considered ethical issues when conducting the researcher. The researcher was ethically bound to respect the participant's human dignity, free and informed consent, privacy and confidentiality, justice and inclusiveness. Before the study, the participants were informed about the nature, purpose and procedures of the study. Participants were free to answer specific questions, and withdraw from this study at any time, for any reason.

The researcher sought for an introductory letter from The Open University of Tanzania, as she sought for research clearance at the University, also permission to conduct the study was requested from The Open University of Tanzania. Respondents' consent was important for the researcher; therefore, making consent was very superficial. The aim of the study was openly disclosed to them before data collection.

After the field study researcher considered the quality of the data collected and analyzed to ensure that the data and field report were well fabricated and plagiarism was tested to ensure the data collected from the field and those obtained from literature reviews of others scholars is well felicitated.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

This chapter presents the findings of the study, which set out to determine the impact of VFDMS toward VAT collection in Tanzania: A case of Dar es Salaam. The specific objectives are; to examine the perceived ease of use of VFDM system by traders in Dar-es-Salaam, to examine perceived usefulness of VFDM system to traders in Dar es Salaam, to examine the efficiency of VFDM system and VAT collection in Dar es Salaam, and to examine the influence of perceived ease of use of VFDM system, perceived usefulness of VFDM system, and the efficiency of VFDM system and VAT collection in Dar es Salaam. The data were analyzed using SPSS and then presented using descriptive statistics, reliability tests (Cronbach's alpha), diagnostic tests, and regression analysis tests such as ANOVA (F-test) and t-test.

4.2 Demographic Information

This section outlines the general demographic features of the survey sample. The section contains information about the sample's composition in terms of Gender, age, business model, position in business, business experience (years), use of VFDM system, and frequent use of VFDM system. This part serves as a steppingstone for more extensive descriptive evaluations of the study objectives, which are described in the next sections of this chapter. Table 4.1 demonstrates that of the respondents sampled, 149 (44.6% of the sample) were male and 185 (55.4%) were female. Males and females carry out business activities in Dar es Salaam. The sampled respondent's distribution by working experience and business model is displayed in Table 4.1

Around 54.2% of all respondents had 5-10 years of work experience in the business, and 45.8% had 1-5 years in business. It can be shown from Table 4.1 that the majority of the sample consisted of direct-to-consumer (wholesale), followed by direct-to-consumer (Retail) with 46.1% and 20.4% respectively. This observation suggests that most of the respondents had direct to consumer business. All respondents (100%) were using VFDM, however 54.2% were using mostly compared to 45.8% this might have been influenced with availability of customers.

Emerging evidence from the field study that female traders(participation) in acceptance of VFDM system are important in decision making, stakeholders engagement, communication and preferences for the uptake of interventions, furthermore, when gender norms identities and relations are ignored, unintended consequences may occurs ,attitudes towards digital technology have been accounted for in terms of usefulness and beliefs concerning positive and negative effects of the system one's personal life and traders community in general. Female and male both trusted that VFDMS had a positive impact on their business activities and that smart gadgets were useful tools. However, female had been reported to express significantly more positive opinions than males such as that the VFDM system enabled to control their business transaction.

Table 4.1 Characteristics of respondents

S/N	QUESTION	RESPONSE	Frequency	%
1.	Gender	Male	149	44.6
		Female	185	55.4
2	Business model	Direct to Consumer-Wholesale	154	46.1
		Direct to Consumer-Retail	68	20.4
		Wholesale Online business	52	15.5
		Retail Online business	60	18
4	Position in business	CEO/Manager	164	49.1
		Shopkeeper	170	50.9
5.	Business experience (years)	1-5 years	153	45.8
		5-10 years	181	54.2
6.	Use VFDM system	Yes	334	100
7.	Frequently do you use VFDM system	Less than fifth daily	153	45.8
		More than fifth daily	181	54.2

Source: Field Data (2023)

4.3 Descriptive Statistics

This section presents results based on descriptive statistics the specific objectives are; to examine the perceived ease of use of VFDM system by traders in Dar-es-Salaam, to examine perceived usefulness of VFDM system to traders in Dar es Salaam, and to examine the efficiency of VFDM system and VAT collection in Dar es Salaam. Respondents were provided with several questions for each specific variable. They were required to circle the response(s) by replying strongly agree, agree, neutral, strongly disagree, disagree. The results are presented in sections 4.3.1 to 4.3.3.

4.3.1 Perceived ease of use of VFDM System by Traders in Dar-es-Salaam

This section presents the results based on descriptive statistics for the independent variable perceived ease of use of VFDM system by traders in Dar-es-Salaam. The

first objective of the study was prepared in order to determine the extent at which traders perceive VFDM as easy system for them to use. Respondents were provided with several questions. They were required to circle the response(s) by strongly agree, agree, neutral, strongly disagree, disagree.

The findings from this objective are presented in Table 4.2. the questions were asked as to whether using the VFDM system in my job would enable me to accomplish tasks more quickly; the results in Table 4.1 show that out of 334 respondents, 31.4% Strongly agreed, 46.1% agreed while 2.1% disagreed and 0.6% strongly disagreed. Concerning whether traders find it easy to use VFDM system to do what they want to do; the results show that 29.3% strongly agreed and 0.6% strongly disagreed while 45.5% agreed and 0.3 disagreed, only 24.3%% were neutral (refer to table 4.2).

Table 4.7 indicates the results on the statement I find VFDM system to be flexible to interact with. The results show that 29.6% strongly agreed and 44.9% agreed while 24.3% were neutral. whether Operating VFDM system is easy for traders' 32% strongly agreed, 47.3% agreed, while 0.6% strongly disagreed. Results in table 4.1 shows that, VFDM can easily be used by traders in Dar es Salaam.

Table 4.2: Perceived ease of use of VFDM System by Traders

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Using the VFDM system in my job would enable me to accomplish tasks more quickly	2 (0.6%)	7 (2.1%)	66 (19.8%)	154 (46.1%)	105 (31.4%)
I would find it easy use VFDM system to do what I want it to do	2 (0.6%)	1 (0.3%)	81 (24.3%)	152 (45.5%)	98 (29.3%)
It would be easy for me to become skillful at VFDM system			77 (23.1%)	(157 (47%)	100 (29.9%)
I find VFDM system to be flexible to interact with	1 (0.3%)	3 (0.9%)	81 (24.3%)	150 (44.9%)	99 (29.6%)
My interaction with the system is clear and understandable		4 (1.2%)	67 (20.1%)	164 (49.1%)	99 (29.6%)
Operating VFDM system is easy for me	2 (0.6%)		67 (20.1%)	158 (47.3%)	107 (32%)
VFDM system is easy to use	1 (0.3%)		61 (18.3%)	169 (50.6%)	103 (30.8%)

Source: Field Data (2023)

4.3.2 Perceived usefulness of VFDM System to Traders in Dar es Salaam

This section presents the results based on descriptive statistics for the independent variable Perceived usefulness of VFDM system by traders. Table 4.3 shows the frequency and percentage distribution of surveyed respondents concerning Perceived usefulness of VFDM system by traders. About 51.2% of all respondents agreed with the statement VFDM system will enable trader to get clients' transactions very quickly. None of the respondents strongly agreed with the statement. Concerning the statement; VFDM system will help traders to follow up transactions from outside the business, 47% of all respondents strongly agreed with the statement, and 31.4% agreed with the statement.

Further, 55.4%, 54.2%, 47.9%, 60.5% of respondents strongly agreed on the statements; Using VFDM system would enhance my effectiveness on the job, using VFDM system in my job would increase my productivity, and using the VFDM system improves my job performance respectively. Further, 39.5%, 41.3%, 47.3% of respondents agreed on the statements (refer table 4.3). The results in table 4.3 implicate that VFDM system is useful for traders in Dar es Salaam.

Table 4.3: Perceived usefulness of VFDM System by Traders

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
VFDM system will enable trader to get clients' transactions very quickly			66 (19.8%)	171 (51.2%)	97 (29.0%)
The VFDM system will help traders to follow up transactions from outside the business	6 (1.8%)	5 (1.5%)	65 (157%)	157 (47%)	101 (30.2%)
VFDM system is useful in retrieval of information from clients	2 (0.6%)		69 (20.7%)	158 (47.3%)	105 (31.4%)
VFDM system will save time of traders		4 (1.2%)	67 (20.1%) (24.3%)	155 (46.4%)	108 (32.3%)
Using the VFDM system improves my job performance			16 (4.8%)	158 (47.3%)	160 (47.9%)
Using VFDM system in my job would increase my productity		1 (0.3%)	16 (4.8%)	138 (41.3%)	181 (54.2%)
Using VFDM system would enhance my effectiveness on the job		2 (1.5%)	12 (3.6%)	132 (39.5%)	185 (55.4%)
Using VFDM system would make it easier to do my job	1 (0.3%)	40 (12%)	61 (18.3%)	166 (49.7%)	127 (38%)

Source: Field Data (2023)

4.3.3 Efficiency of VFDM System and VAT Collection in Dar es Salaam

This section presents the results based on descriptive statistics for the independent variable he efficiency of VFDM system and VAT collection in Dar es Salaam. The third objective of the study was prepared in order to determine efficiency of VFDM system and VAT collection in Dar es Salaam. Respondents were provided with several questions. They were required to circle the response(s) by strongly agree, agree, neutral, strongly disagree, disagree. The findings from this objective are presented in Table 4.4. the questions were asked as to whether VFDM system does not have any problem with performing each transaction; the results in Table 4.4 show that out of 334 respondents, 56.9% Strongly agreed, 41.3% agreed while 1.8% were neutral. Concerning whether level of efficient performing increases during the day; the results show that 57.8% strongly agreed and 40.4% agreed while 1.8% were neutral (refer table 4.4)

Table 4.4 indicates the results on the statement Its performance on the terrain field is efficient and predictable. The results show that 44.9% agreed and 29.6% strongly agreed while 0.3% strongly disagreed. Whether it stores all information done 49.7% agreed while 28.7% strongly agreed. Results in table 4.4. The results demonstrated the effeciency of VFDM as a data collection system.

Table 4.4: Efficiency of VFDM System

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The VFDM system does not have any problem with performing each transaction			6 (1.8%)	138 (41.3%)	190 (56.9%)
The level of efficient performance increases during the day			6 (1.8%)	135 (40.4%)	193 (57.8%)
Its performance on the terrain field is efficient and predictable	1 (0.3%)	3 (0.9%)	81 24.3%)	150 (44.9%)	99 (29.6%)
It stores all information done	1 (0.3%)		71 (21.3%)	166 (49.7%)	96 (28.7%)

Source: Field Data (2023)

4.4 Inferential Statistics

This section presents inferential analysis which performed to ascertain the actual implication of collected data and to draw conclusions pertaining to the relationship of the variables in this study. Statistical significance between independent variables (perceived ease of use, perceived usefulness, and efficiency) and dependent variables (Increase in Tax collection) was established using regression analysis. This section starts by presenting diagnostic test of variables including reliability, correlation, normality, and multicollinearity. Further, the study presents regression results.

4.4.1 Diagnostic test of Variables

4.4.1.1 Reliability Test

Cronbach's Alpha is a measure of internal consistency reliability used to assess the reliability or consistency of a psychometric test or scale. It measures the extent to which all the items in test are positively correlated with each other and provides

information about the degree to which the items test is measuring the same construct. Cronbach range from 0-1 with higher values indicating greater internal consistency reliability. The results for Cronbach's Alpha Reliability efficient were conducted for all predictor variables (perceived ease of use, perceived usefulness, and efficiency) and outcome variables (Increase in tax collection). Table 4.5 show that all variables have internal consistency of α 0.7 and above. This shows that, the data have a good reliability in internal consistency. Benchmark value for Cronbach's alpha coefficient used was from (Jim & Forest, 2013) who argued that α = 0.7 and above is reliable since the variable is acceptable only if more significant than 0.7.

Table 4.5 Cronbach's Alpha

Variable	Cronbach's Alpha	Number of Items
Perceived ease of use	0.868	8
Perceived Usefulness	0.862	8
Efficiency	0.676	4

Source: Field Data (2023)

4.4.1.2 Correlation Analysis

Correlation is a statistical tool that helps to measure and analyze the degree of relationship between two variables. In this study, correlation is used to denote the association between two variables (Kothari, 2004). The aim of a correlation test is to measure the strength and direction of the relationship between two or more variables. Moreover, that association is linear when the value of one variable increase and the value of another variable tends to increase this is said to be a perfect and positive correlation. While the value of one variable increase and the value of other variable tends to decrease is said to be a perfect and negative correlation. Ratner (2009)

demonstrated that the correlation coefficient is a number between -1 and +1 that indicate the strength and direction between dependent and independent variables while the significance level is 0.05. Based on Table 4.6 Pearson's correlation of all variables ranges from 1 to -1 at a significance level ≤ 0.05, therefore there is a linear correlation between independent variables (perceived ease of use, perceived usefulness, and efficiency) and dependent variable (increase in tax collection).

Table 4.6 Correlation Table (n=334)

		Perceived ease of use	**Perceived usefulness**	**Efficiency**	**Increase in tax collection**
Perceived ease of use	Pearson Correlation	1			
Perceived usefulness	Pearson Correlation	.755**	1		
Efficiency	Pearson Correlation	.790**	.762**	1	
Increase in tax collection	Pearson Correlation	.849**	.911**	.828**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data (2023)

4.4.1.3 Multicollinearity

Multicollinearity situation exists whenever a predictor variable is in high correlation with one or more outcome variables (Vatcheva *et al.,* 2016). The degree of Multicollinearity was computed using Variance Inflation Factors (VIF) and Tolerance. According to (Ros-Galvez *et al.,* 2016) VIF if VIF is equal to 1 the predictor variable is not correlated to the remaining one means multicollinearity does not exist, where VIF is higher than 10 or tolerance is lower than 0.1 there is

significant multicollinearity, meaning that, the study has the problem, of multicollinearity. Table 4.7 shows that there is no multicollinearity in the model since all VIF values are less than 10 and Tolerance values are higher than 0.1

Table 4.7 Collinearity Statistics

Variables	Collinearity Statistics	
	Tolerance	VIF
Perceived ease of use	.278	3.596
Perceived Usefulness	.176	5.679
Efficiency	.350	2.860

Source: Field Data (2023)

4.4.1.4 Normality

A normal distribution is a typical assumption in many statistical investigations, and the normality test is a statistical technique used to verify whether a particular data set conforms to this assumption. Finding out whether a collection of data fits into a normal distribution is the goal of a normality test. Testing for normalcy can be done using a variety of techniques, such as statistical tests and graphic methods. Creating a histogram and performing a statistical test are examples of graphical approaches. In order to determine if a data set is normal, a normality test was employed in conjunction with graphical techniques. Since almost all of the bars in the histogram are located within the U-shaped (Curve) in the picture, the test for normality revealed that there was no violation of normality assumption as the most of the scores appeared reasonably at the center and the score were normally distributed (see figure 4.1).

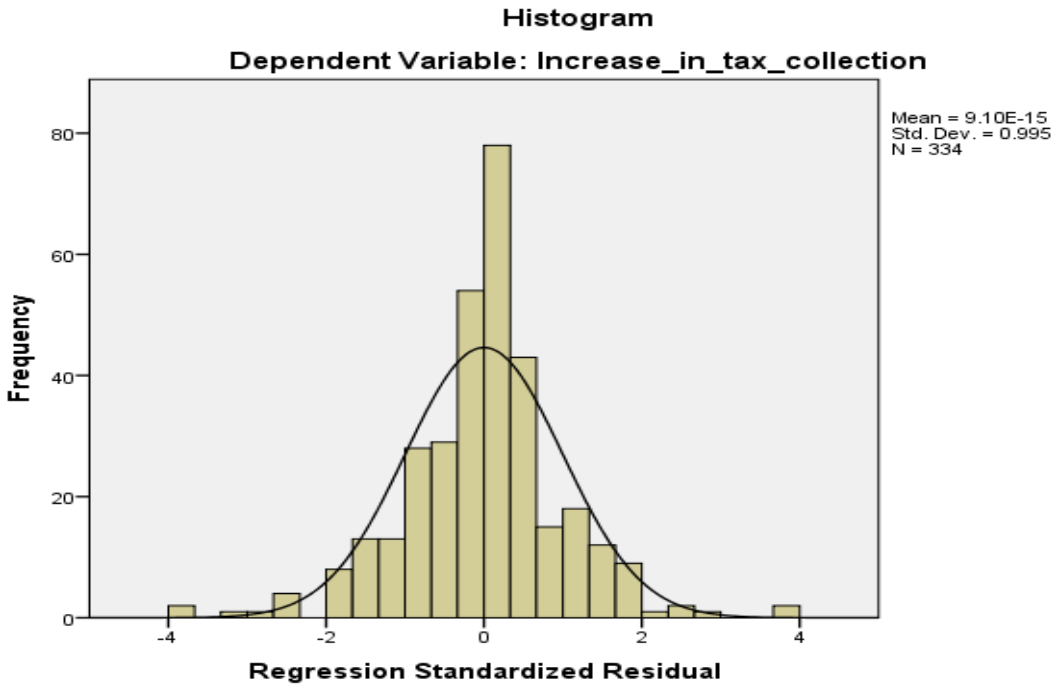

Figure: 4.1 Histogram

4.4.2 Regression Result

According to Kothari (2008), regression analysis is a statistical method for identifying the relationships between variables that are solely coincidental. Regression analysis was used in this study to create and show a statistically significant relationship between the independent variables (perceived ease of use, perceived usefulness, and efficiency) and outcome variables (increase in VFDM). The study's findings showed that perceived ease of use, perceived usefulness, and efficiency all had an R square of 0.899, indicating that they each had an 89.9% influence on tax collection increase while only having a 11.1% is influenced on other factors or predictors. This is illustrated in Table 4.8 below.

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df 1	df 2	Sig. F Change
1	.948[a]	.899	.899	.15213	.899	983.926	3	330	.000
a. Predictors: (Constant), Efficiency, Perceived usefulness, Perceived ease of use									
b. Dependent Variable: Increase in tax collection									

Source: Field Data (2023)

Further, the analysis of variance (ANOVA) results as indicated in Table 4.8 shows that, the model goodness of fit is suitable for this data since F = 983.926 at p value 0.000 which is less than significance level of 0.05. Hence, we accept the alternative hypothesis and conclude that there is a significant linear relationship between perceived ease of use, perceived usefulness, and efficiency and increase in tax collection.

Table 4.9 Analysis of Variance Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.311	3	22.770	983.926	.000[b]
	Residual	7.637	330	.023		
	Total	75.947	333			
a. Dependent Variable: Increase in tax collection						
b. Predictors: (Constant), Efficiency, Perceived usefulness, Perceived, ease of use						

Source: Field Data (2023)

Table 4.9 shows the influence of each dependent variable (perceived ease of use, perceived usefulness, and efficiency) on dependent variable (Increase in tax

collection). Firstly, in respect to perceived ease of use the study sought to measure its influence on the increase in tax collection and it was guided by the following alternative hypothesis: *H*a: perceived ease of use of VFDM system by trader's influences increase in tax collection; at alpha = 0.05. The findings in Table 4.9 of combined variables indicated that t = 9.336 and the p-value = 0.000< 0.05. This implies that we accept the alternative hypothesis and conclude that perceived ease of use influences increases in tax collection.

Secondly, in respect to perceived usefulness the study sought to measure its influence on the increase in tax collection and it was guided by the following alternative hypothesis: *H*a: perceived usefulness of VFDM system by trader's influences increase in tax collection; at alpha = 0.05. The findings in Table 4.10 of combined variables indicated that t = 19.283and the p-value = 0.000< 0.05. This implies that we accept the alternative hypothesis and conclude that perceived usefulness influences increase in tax collection.

Thirdly, in respect to efficiency the study sought to measure its influence on the increase in tax collection and it was guided by the following alternative hypothesis: *H*a: efficiency of VFDM system by trader's influences increase in tax collection; at alpha = 0.05. The findings in Table 4.10 of combined variables indicated that t = 5.480 and the p-value = 0.000< 0.05. This implies that we accept the alternative hypothesis and conclude that efficiency use of VFDM influences increase in tax collection.

Table 4.10 Coefficient Table

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.126	.080		1.564	.119
	Perceived ease of use	.254	.027	.288	9.336	.000
	Perceived usefulness	.541	.028	.563	19.283	.000
	Efficiency	.176	.032	.171	5.480	.000
a. Dependent Variable: Increase in tax collection						

Source: Field Data (2023)

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

5.2 Perceived ease of use of VFDM and Increase in Tax Collection

According to the study's findings, perceived ease of use was significantly positively correlated with an increase in tax collection. This implied that when traders viewed the system as more beneficial the more, they thought it was simple to use and vice versa, the more they used it which increased tax collection. This result is in line with the findings of earlier researchers, such as Opiso *et al*. (2023), who found that traders that have a positive and strong opinion of the systems' utility utilize them more than those that have a negative or weak opinion. Uyar *et al*. (2021) discovered that the digitalization of government services reduces tax evasion.

The study also discovered a direct relationship between system use and perceived ease of use, suggesting that technologies that are perceived as user-friendly are valued and, as a result, increase tax collection. Furthermore, the results corroborate the research conducted in Japan by Habibullah *et al*. (2022), who discovered that fuel taxes may be accurately collected without any losses through the usage of a software architecture platform.

The study's conclusions align with the tenets of the Technology Acceptance Model (TAM) (Davis, Citation 1989). According to TAM, perceived ease of use, and perceived usefulness have a significant impact on users' acceptance and adoption of technology (Venkatesh & Davis, 2000). Our study's findings indicate that perceived

ease of use is a reliable indicator of an increase in tax collection, which is in line with the TAM's emphasis on the benefits of technology when seen positively by taxpayers.

Based on the results, it can be argued that attitudes towards VFDM's ease of use improve tax collection because, in Tanzania, taxpayers who view the e-tax system favorably for example, by considering it to be time-saving, effective in tax return preparation, easy to use, and secure develop positive attitudes towards it and ultimately adopt it, which boosts tax collection. The results of Ondara *et al*. (2016), who found a significant correlation between attitudes toward electronic tax systems and tax collection, lend support to this; however, the author did not examine how electronic tax systems affect tax collection growth. Kiring'a *et al*. (2017) discovered a robust correlation between tax compliance and the perception of online tax filing with respect to its convenience and simplicity of filing. In Tanzania, better tax collection is correlated with more taxpayer use of the e-tax system.

5.3 Perceived Usefulness of VFDM and Increase in Tax Collection

Perceived usefulness refers to an individual's belief about the perceived benefits of utilising a specific technology. This study used the assumption that people's intents to use a certain technology would increase in tandem with their perception of its utility, which would enhance tax collection.

The results of the study demonstrated a significant positive correlation between perceived usefulness and tax collection growth. This indicated that users are likely to

adopt a positive attitude towards using the system when they perceive it as a valuable addition to the practice, and vice versa. This finding aligns with He *et al.* (2018) deduction that perceived effectiveness of the system influences attitudes towards its use in both direct and indirect ways (Mohammed, 2010). However, Tahar *et al.* (2020) found that if a system is deemed helpful, it will be applied in a workplace setting regardless of the attitude towards its use.

In a similar vein, it was discovered that increase in tax collection was positively and significantly influenced by the perceived usefulness of technology. The fact that Tanzanian's revenue authorities, like revenue authorities worldwide, are shifting towards the use of digital technologies in tax collection activities supports this conclusion. In fact, paying taxes electronically expedites the processing of returns, increases taxpayer efficacy, and lowers error rates. Similar stances have been taken in earlier research by Chen and Aklikokou (2020) in China and Sijabat (2020) in Indonesia. Generally, since Tanzania is becoming a more technologically advanced nation, taxpayers and collectors must be aware of how technology is used, especially when paying complicated taxes like excise duty.

Furthermore, the technology acceptance model is the most well-known and widely applied theory for comprehending a person's embrace of information technology. When workers are invested in their jobs, they will study everything there is to know about them, including the policies and procedures set up by the business and the technology it uses (Davis, 1989). According to this study, employee commitment is greatly increased by the perceived value of technology, particularly when utilizing the VFDM system.

According to Davis (1989), the study's findings are consistent with the principles of the Technology Acceptance Model (TAM). TAM states that users' acceptance and adoption of technology are significantly influenced by their perceptions of its perceived usefulness. Perceived usefulness is a good predictor of increased tax collection, which is consistent with the TAM's focus on the advantages of technology when seen favourably by taxpayers. The results imply that traders are somewhat more likely to be committed to using the VFDM to generate tax receipts when they perceive it to be beneficial. However, the study showed that when traders are more aware of the benefits of the technology the TRA has embraced, they will be more satisfied with it and would use it more frequently, which will enhance tax collection.

Consistent with Panari *et al*. (2021) findings about the perceived usefulness of technology, perceived usefulness was predicated on the belief that new technological tools would boost performance. All of this means that the utility and interaction of technology need to be clearly stated in order for it to be classified as helpful and for employees to be given an appropriate explanation of how to utilise it. One of the goals of encouraging staff to embrace new technologies should be performance improvement.

These results corroborated the findings of studies by (Malik , Annuar, Tala , Malak & Okolocha (2021), which endorsed the idea that perceived usefulness is a prospective user's subjective likelihood, providing a probability that the technology used will enhance the performance of the individual or team from an organisational standpoint. A technology's perceived usefulness is reflected in the operators' own assessment of whether using it would enhance performance.

5.4 Efficiency of VFDM and Increase in Tax Collection

VFDM can help with many of these issues and increase the effectiveness of tax collection. Digital platforms, for instance, can streamline tax payment and filing, lower the likelihood of corruption, and increase accuracy of the assessment of taxes. Additionally, these technologies can improve the ability of tax inspectors to process tax returns and spot possible cases of tax evasion more quickly and effectively. In addition, governments can find non-compliance trends and create more efficient tax laws by utilising cutting-edge technologies like data analytics and machine learning. The study found that, VFDM performs with efficiency thereby increase tax collection.

The current study is similar to the study by Jiang *et al.* (2022) who found that, efficiency in the use of technology in tax collection increases, tax collection. Further, Mallick (2021) the total amount of tax income collected was significantly improved by ICT infrastructures. The implementation of technology in tax administration has promise for enhancing tax compliance, decreasing tax collection expenses, and augmenting revenue collection. Technology adoption can also decrease the possibility of corruption in tax administration while increasing accountability and transparency.

The effectiveness of the VFDM in increasing tax collection was investigated in this study. Specifically, there are concurrent theories regarding the contribution of efficiency to higher tax collection. The results showed that Tanzania collects more taxes when VFDM is used effectively. The findings demonstrated that Tanzania's

increased tax collection can be explained by the TAM.Through more intelligent use of the data they gather, revenue administrations can better collect income, lower costs, and improve the efficacy of their internal operations. Digital services and technologies are always evolving. Certain technologies and services have the potential to cause significant disruptions in the way tax administrations operate. These changes could lead to improved fiscal outcomes, alter the dynamics between taxpayers and the tax administration, or even pave the way for changes to tax laws.

CHAPTER SIX

SUMMARY, CONCLUSIONS, RECCOMENDATION AND POLICY IMPLICATIONS

6.1 Introduction

This chapter covers the summary of the findings, conclusion and recommendation made by the study. The summary of the findings was presented based on the specific objectives of the study which was to examine perceived ease of use of VFDM, to examine perceived usefulness of VFDM, and to examine efficiency use of VFDM towards increase in VAT in Tanzania, Dar es Salaam. The conclusion and recommendation made by the study were purely derived from the study findings.

6.2 Summary

The study examined the impact of virtual financial data management system (VFDMS) toward Value Added Tax (VAT) collection in Tanzania: a case of TRA, Dar es salaam city. In this study the quantitative study approach was adopted. Under quantitative approach, cross-sectional survey design was used by the researcher in examining the impact of virtual financial data management system (VFDMS) toward Value Added Tax (VAT) collection by using an accurate sample of traders so as to get the results which enabled to draw the conclusion of the entire Tanzania. The study was conducted in Dar es Salaam region, Tanzania. The sample size used in the study was 334 respondents who are traders. The data were collected from respondents by using closed ended questionnaires. The findings revealed that traders view VFDM system as easy to use, usefulness, and efficiency. Further findings reviled that, perceived ease of use VFDM system, perceived usefulness of VFDM

system, and efficiency in the use of VFDM system had positive relationship with increase in tax collection.

6.3 Conclusions

In conclusion, the study investigated the influence of VFDM system on value-added tax collection in Dar es Salaam. The theory has been effectively tested through field data collecting and the use of multiple linear regression analysis. Results offer convincing evidence that the use of VFDM does play a substantial and critical role in predicting the increase in tax collection. In specific, we examined the particular aspects of digital tax adoption, such as perceived ease of use, perceived usefulness, and efficiency use of VFDM towards value-added tax. All VFDM systems discovered to be positive and significant predictors of increasing tax collection. This shows that the perceived ease of use, perceived usefulness, and efficiency of VFDM influences increase in Tax collection in Tanzania.

6.4 Recommendations

The results demonstrate how important it is to prioritise and encourage Tanzania to implement virtual billing tax administration system adoption strategies in order to boost tax collection. Policymakers and tax authorities are then recommended to use these data as a basis for actions and policies designed to improve tax collection. This research provides useful details regarding the specific elements of the adoption of digital taxes that have the biggest influence on the rise in tax revenue. This can direct targeted projects and training courses to enhance digital competencies, the information infrastructure, and the industry participants' perceptions of their value.

6.5 Contribution of the Study

This study contributes to the expanding body of knowledge about how data collecting outcomes are impacted by digitalization. This is particularly true now, as digital technology is revolutionising economic activities. The findings also have important economic ramifications. Improved service delivery can lead to more government revenue, which can be utilised to pay for infrastructure development and other essential public services. Furthermore, higher financial performance and better service delivery can come from increased tax collection. This research contributes to the growing corpus of information in the academic community regarding the connection between taxes and technology. It emphasises how important it is to include factors such as perceived ease of use, perceived usefulness and efficiency use of VFDM when assessing how adoption of digital taxes affects performance. Methodological implications of this for future research in this field are indicated.

6.6 Policy Implications

One of the policy implications is that tax authorities must support and prioritise efforts to embrace digital taxes. Policymakers may wish to undertake certain measures in order to build information infrastructure, create digital capabilities, and increase perceived usefulness, perceived ease of use, and efficiency use of VFDM in tax collection. The results also demonstrate the importance of industry-specific tax regulations to address specific possibilities.

6.7 Area for Further Research

One potential avenue for future research could be to investigate the reasons behind the absence of a significant and positive correlation between increased tax collection

and perceived ease of use. Analysing the specific barriers or challenges that may make the use of digital tax adoption tools seem more challenging could yield valuable insights for enhancement.

REFERENCES

Babbie, E. (1995). The practice of social research. Wadsworth. Publishing Company. USA

Barati, A., Moradi, P., Ahmadi, B. & Azizpour, P. (2014), "A study of the models for adoption of e-tax returns from the perspective of taxpayers", *Indian Journal of Fundamental and Applied Life Sciences*, *4*(1), 1923-1939.

Carter, L., Shaupp, L., Hobbs, J., & Campbell, R. (2011). The role of security and trust in the adoption of online tax filing. Transforming Government: People, Process and Policy, 5(4).

Chen, L., & Aklikokou, A. K. (2020). Determinants of E-government adoption: Testing the mediating effects of perceived usefulness and perceived ease of use. *International Journal of Public Administration*, (10), 850–865. https://doi.org/10.1080/01900692.2019.1660989

Chuttur, M.Y. (2009), "Overview of the technology acceptance model: origins, developments and future directions", *Working Papers on Information Systems*, 9(37), 9-37.

Cornel, D. (2017). Challenges Facing the Adoption of Electronic Fiscal Devices (EFDs) in Revenue Collection: A Case of Morogoro Municipality, Tanzania. A Dissertation Submitted to the School of Business in Partial fulfillment of the Requirements for the Award of Master of Business Administration (MBA) of Mzumbe University

Davis, F. D. (1986). The technology acceptance model for empirically testing new end-user information systems: theory and results. *PhD. Dissertation Massachusetts Institute of Technology*.

Ebeke, C. (2010). Remittances, Value Added Tax and Tax Revenue in Developing Countries. Working Paper No. 126.

Ebeke, C. (2016). Remittances, Value Added Tax and Tax Revenue in Developing Countries. *Working Paper No. 126*. Retrieved: March, 2021, from http://publi.cerdi.org/ed/2010/2010.30.pdf.

Fan, H., Liu, Y., Qian, N., & Wen, J. (2017). The Short-and Medium-Run Effects of Computerized VAT Invoices on Tax Revenues in China

Habibullah, B., Teng, R., & Sato, K. (2022). A promising distance-based gasoline tax charging system based on spatio-temporal grid reservation in the Era of Zero-Emission Vehicles. *Journal of Transportation Technologies,* 12(4), 651–680. https://doi.org/10.4236/jtts.2022.124038

He, Y., Chen, Q., & Kitkuakul, S. (2018). Regulatory focus and technology acceptance: Perceived ease of use and usefulness as efficacy, *Cogent Business & Management, 5* (1) DOI: 10.1080/23311975.2018.1459006

Ikasu, J. E. (2019). Assessment of Challenges Facing the Implementation of Electronic Fiscal Devices (EFDs) in Revenue Collection in Tanzania. *International Journal of Research in Business and Technology.*

Jayawardane, D. (2016), "Taxpayer attitude and tax compliance decision in Sri Lanka", *International Journal of Arts and Commerce, 5* (2), 124.

Jiang, Y., Qin, J., Khan, H. (2022). The Effect of Tax-Collection Mechanism and Management on Enterprise Technological Innovation: Evidence from China. *Sustainability,* 14(14), 8836. https://doi.org/10.3390/su14148836

Khaddafi, M., Aspan, H., Heikal, M., Wahyuddin, F. and Zatin, H. (2018), "Effect of perception of facilities, intensity of conduct, and satisfaction of Tax

Payers to Submission of Letter by E-Filing Notice on Tax Service", Proceedings of MICoMS, pp. 583-587

Kothari, C. (2004). *Research Methodology: Methods and Techniques.* New Delhi: New Age International (P) Limited Publishers. Retrieved October 12, 2020 from https://www.academia.edu

Makoza, F. (2022). Governmentality of Value Added Tax Compliance using Electronic Fiscal Device in Malawi. *International Journal of Technology Diffusion*, *Vol 12*, DOI:10.4081/IJTD 288524

Malima, A. (2013). Enhancing Income Tax Collection in SMEs Customers' Perspective: A Case of Tanzania Revenue Authority (TRA), Kinondoni. Dar es Salaam: Mzumbe University. Unpublished Thesis.

Mallick H. (2021). Do governance quality and ICT infrastructure influence the tax revenue mobilisation? An empirical analysis for India. *Economic Change and Restructuring*, *54*(2), 371–415. https://doi.org/10.1007/s10644-020-09282-9

Mandari, H., Koloseni, D & Nguridada, J (2017). Electronic Fiscal Device (EFD) Acceptance for Tax Compliance among Trading Business Community in Tanzania: The Role of Awareness and Trust. *International Journal of Economics, Commerce and Management United Kingdom*.

NBS. (2019). Tax statistics report 2017/18 Tanzania Mainland

OECD. (2017). Tax and crime: Publications and reports https://www.oecd.org/ctp/crime/publications-and reports-on-tax-crime.htm.

Okolocha, C. B. (2021). Job Satisfaction and Employee Productivity: Evidence from Selected Universities in South-East, Nigeria. *International Journal of Business & Law Research, 9*(1), 127-138.

Omweri, M. L., Obongo, B. M., Obara, P. M., & Onsongo, C. O. (2011). The effectiveness of electronic tax registers in processing of value added tax returns: Perspectives from registered VAT taxpayers in Kisii Town, Kenya. *African Journal of Business & Management (AJBM), 1*, 44–54.

Opiso, J., Nkundabanyanga, S.K., Tumwine,S., Kaawaase, T.K., Senyonga, L., & Echegu, S. (2023). The digital era of taxation: Analysing the effectiveness of digital tax adoption on petroleum excise duty revenue, *Cogent Business & Management*, *10*(3) 10.1080/23311975.2023.2272370

Organisation for Economic Co-operation and Development (OECD). (2011). Revenue statistics, 1965–2010. Paris. https://doi.org/10.1787/19963726

Panari C., Lorenzi G., Mariani M.G. (2021). The predictive factors of new technology adoption, workers' well-being and absenteeism: the case of a public maritime company in Venice. *International Journal of Environmental Research and Public Health, 1*8(23):12358. https://doi.org/10.3390/ijerph182312358

Penduka, G. (2015). An assessment of the efficiency of fiscalised electronic devices in improving revenue collection in selected companies in Harare: The case of the fiscal electronic tax registers. *Master's Dissertation, Master of Science in Public Administration,* University of Zimbabwe, Harare.

Randolph, J. J. (2009). A guide to writing the dissertation literature review. Practical Assessment, Research & Evaluation, *14*(13), 1–13. Retrieved from http://pareonline.net/pdf/ v14n13.pdf.

Samson, M. (2012). Electronic tax administration advisory committee annual report to congress. NY: Congress.

Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research Methods for Business Students*. Pearson Education Ltd., Harlow.

Sifers, S., Puddy, R., Warren, J., & Roberts, M. (2000). Reporting of Demographics. *Journal of Pediatric Psychology*, *27*(1), 19–25.

Sijabat, R. (2020). Analysis of e-government services: A study of the adoption of electronic tax filing in Indonesia. *Jurnal Ilmu Sosial Dan Ilmu Politik*, 23(3), 179–197. https://doi.org/10.22146/jsp.52770

Snavely, J. (1990). "Fiscal Policies and their Macroeconomic Implications for Kenya: Kenya Strategic Policies for the 21st Century" *Institute of Policy Analysis and Research*, Nairobi.

Tahar, A., Riyadh, H. A., Sofyani, H., & Purnomo, W. E. (2020). Perceived ease of use, perceived usefulness, perceived security and intention to use e-filing: The role of technology readiness. *The Journal of Asian Finance, Economics and Business (JAFEB)*, 7(9), 537–547. https://doi.org/10.13106/jafeb.2020.vol7.no9.537

Tala, H., & Malak, A. (2021). The impact of job satisfaction on employee job performance. *PalArch's J. Archaeol. Egypt/Egypt*, *18*(15), 510-520.

TRA. (2010). Let us Pay Tax for Big Results Now, EFD: For Accurate, sales and VAT Records.

TRA. (2014). What is Electronic Fiscal Device? Retrieved October 2, 2020, from http://www.tra.go.tz/index.php/e-fiscal-devices-efd

TRA. (2015). *Electronic Fiscal Devices,Planning and Modernisation programme unit leaflet* No 4.

TRA. (2016). Mwongozo wa utumiaji wa mashine maalumu za kutolea risiti za kodi za kieletroniki.

TRA. (2019). Tanzania's revenue collection hits a four year high. Accessed on October 12, 2020 from https://furtherafrica.com/2019/11/28/tanzanias-revenue-collection-hits-a-four-year-high/

URT. (2010). Tanzania: Government Notice No. 192.

Uyar, A., Nimer, K., Kuzey, C., Shahbaz, M., & Schneider, F. (2021). Can e-government initiatives alleviate tax evasion? The moderation effect of ICT. *Technological Forecasting and Social Change*, 166, 120597. https://doi.org/10.1016/j.techfore.2021.120597

Weru, J., Kamaara, M. & Weru, A. (2013). Impact of strategic change: Introduction of electronic tax register for enhancement of tax collection at Kenya Revenue Authority. *International Journal of Social Sciences and Entrepreneurship, 1* (5), 257-270.

Weru, M., Kamaara, M., & Weru, N. (2016). "Impact of strategic change: Introduction of electronic tax register for enhancement of tax collection at Kenya Revenue Authority", *International Journal of Social Sciences and Entrepreneurship, 1* (5)., 257-270

Yin, R. (2009). *Case Study Research: Design and Methods.* (4th Ed). Thousand Oaks, CA: Sage. Retrieved October 12, 2020 from https://journals.nipissingu.ca

Yunusu.K. (2015). Challenges faced by taxpayers in using electronic fiscal devices in Tanzania, A case study of selected taxpayers in Nyamagana district,Mwanza city, Mzumbe Univeristy.

APPENDICES

APPENDIX II: RESEARCH QUESTIONNARE

Dear respondents, I am BARAKA IBRAHIM PHINIAS pursuing Masters in Business Administration. I am carrying out a research study to examine the influence of Virtual financial data management system towards Value added tax collection in Tanzania. This is purposely for accomplishment of an academic requirement, so your cooperation is crucial and I assure you that the information you are going to provide will be taken for confidential and with due respect.

Therefore, I would like to invite you to respond on the prepared questions on that paper.

RESEARCH QUESTIONNAIRE FOR TRADERS

Demographic information

S/N	QUESTION	RESPONSE	Provide Appropriate Number
1.	What is your gender?	1. Male 2. Female	
2.	What is your age in years?		
3.	What is your business model?	1. Direct to consumer-Wholesale 2. Direct to consumer-Retail 3. Wholesale Online business 4. Retail Online business 5. Other (Please, specify….)	
4.	Which position do you hold in your business?	1. CEO/Manager 2. Shopkeeper 3. Other (Please, specify….)	
5.	How long have you worked here?	1. 1-5 years 2. 5-10 years 3. More than 10 years	
6.	Do you use VFDM system when dealing with client transactions?	1. Yes 2. No	

7.	How frequently do you use VFDM system to do payment with your customers?	1. Less than fifth daily 2. More than fifth daily	

Objective 1: Perceived ease of use of VFDM system by traders

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Using the VFDM system in my job would enable me to accomplish tasks more quickly					
I would find it easy use VFDM system to do what I want it to do					
It would be easy for me to become skillful at VFDM system					
I find VFDM system to be flexible to interact with					
My interaction with VFDM system would be clear and understandable					
Operating VFDM system is easy for me					
My interaction with the system is clear and understandable					
VFDM system is easy to use					

Objective 2: Perceived usefulness of VFDM system by traders

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
VFDM system will enable trader to get clients' transactions very quickly					
The VFDM system will help traders to follow up transactions from outside the business					
VFDM system is useful in retrieval of information from clients					
VFDM system will save time of traders					
Using the VFDM system					

improves my job performance					
Using VFDM system in my job would increase my productity					
Using VFDM system would enhance my effectiveness on the job					
Using VFDM system would make it easier to do my job					
VFDM system is useful in my job					

Objective 3: Efficiency of VFDM system

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The VFDM system does not have any problem with performing each transaction					
The level of efficient performing increases during the day					
Its performance on the terrain field is efficient and predictable					
It stores all information done					

RESEARCH QUESTIONNAIRE FOR TRA-HQ STAFF

Demographic information

S/N	QUESTION	RESPONSE	Response
1.	What is your gender?	1. Male 2. Female	
2.	What is your age in years?		
3.	Which position do you hold?		
4.	How long have you worked here?	1. 1-5 years 2. 5-10 years 3. More than 10 years	
5.	What is your level of education?	1. Secondary 2. Certificate 3. Diploma 4. Bachelor 5. Masters 6. PhD	
6.	Do you use VFDM	1. Yes	

	system on the collection of VAT?	2. No	
7	In your opinions, has the application of VFDM system in VAT collection been made easy	1. Yes 2. No	

VAT Collection in Dar es Salaam for five years

No	Years	Tax Collected	
1	2018		
2	2019		
3	2020		
4	2021		
5	2022		