

**THE INFLUENCE OF ELECTRONIC FISCAL DEVICES (EFDs) ON
VALUE ADDED TAX (VAT) COLLECTION: A CASE OF VAT
REGISTERED TRADERS IN MOROGORO MUNICIPALITY,
TANZANIA.**

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TANZANIA.**

By

Chamshama, Daffa

**A Dissertation Submitted in Partial Fulfilment of the Requirements for Award of
the Degree of Master of Business Administration (Corporate Management) of
Mzumbe University**

June 2015

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled **The Influence of Electronic Fiscal Devices (EFDs) on Value Added Tax (VAT) Collection: A Case of VAT Registered Traders in Morogoro Municipality, Tanzania** in partial fulfilment of the requirements for award of the degree of Master of Business Administration (Corporate Management) of Mzumbe University.

Signature

Major Supervisor

Signature

Internal Examiner

Accepted for the Board of

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ACKNOWLEDGEMENT

Thanks to Almighty God for his guidance, mercy, grace, blessings and for giving me health and ability which enabled me to complete this dissertation successfully.

I would like to express my sincere gratitude to Dr. Jaraj Kikula, my supervisor, the lecturers and assistant lecturers of Masters of Business Administration (Corporate Management) at Mzumbe University for their vast knowledge and skills in many areas and their assistance in writing this dissertation.

Special thanks should go to my father Prof. Shabani Chamshama who assisted me financially by paying school fees and other costs. Special thanks are also to my beloved mother, the late Joyce John Daffa for her guidance and support which helps me until now.

Thanks to my family, friends and classmates who in one way or another made invaluable contributions in terms of suggestions, advice, encouragement and strength which made it possible for me to do this dissertation.

Lastly, I would like to express my sincere thanks to my host organization, Tanzania Revenue Authority (TRA) Morogoro regional headquarter and those who responded to the questionnaires, the VAT registered traders in Morogoro Municipality for their valuable contribution and accepting me to do this dissertation.

DEDICATION

This dissertation is dedicated to all my family members for their understanding and encouragement during the period of my MBA (Corporate Management) studies.

ABBREVIATIONS AND ACRONYMS

BOT	Bank of Tanzania
EFDs	Electronic Fiscal Devices
EFP	Electronic Fiscal Printer
ESD	Electronic Signature Device
ETR	Electronics Tax Register
ICT	Information and Communication Technology
IMF	International Monetary Fund
KRA	Kenya Revenue Authority
MoF	Ministry of Finance and Economic Affairs
RTC	Resistance to Change
TRA	Tanzania Revenue Authority
TZS	Tanzanian Shillings
UIN	User Identification Number
URA	Uganda Revenue Authority
VAT	Value Added Tax
WB	World Bank

ABSTRACT

The purpose of this study was to assess the influence of use of Electronic Fiscal Devices (EFDs) on Value Added Tax (VAT) collection among VAT registered traders in Morogoro Municipality, Tanzania. The study sought to explore the status of EFD system on improved VAT compliance, assess the quality of EFD system in relation to sealed loopholes of VAT evasion as well as investigating capacity of the VAT registered traders on the use of EFD machines. The research used a case study research design. Ten percent (10%) of the target population was used as a sample size of this study. Using a simple random sampling technique, 39 VAT registered traders were selected from a population of 387 VAT registered traders and 11 Tanzania Revenue Authority (TRA) officers who were the key informants of this study were selected from a total population of 109 TRA officers working at Morogoro regional office. The main instrument of collecting primary data were the questionnaires and interview while secondary data were obtained from TRA. Analysis of data was done using descriptive statistics generated in the Statistical Package for Social Sciences (SPSS). Empirical findings reveal that the EFD system assisted in improvement of VAT compliance and the system was ineffective in sealing the loopholes of VAT evasion. It was further found out that the VAT registered traders were effectively trained on the use of EFD machines. Based on the research findings the study has concluded the following: the use of EFD system has a significant impact on the improvement of VAT compliance, the EFD machines were not effective in sealing the loopholes for VAT evasion and the training given by TRA through the suppliers and seminars increased the capacity of using the EFD machines. The policy implication of this study is for the Government through TRA to come up with more superior system which can detect any form of corruption, falsification and fraud. More efforts are needed to increase the benefits of using the EFD machines and remove the challenges of using these machines and other medias should also be used in training programme rather than focusing on suppliers and seminars only.

Keywords: Electronic Fiscal Devices, Value Added Tax, VAT registered traders.

TABLE OF CONTENTS

CERTIFICATION	ii
DECLARATION AND COPYRIGHT	iii
ACKNOWLEDGEMENT	iv
DEDICATION	v
ABBREVIATIONS AND ACRONYMS	vi
ABSTRACT	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xi
LIST OF FIGURES	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background Information	1
1.2 Statement of the Problem	7
1.3 Research Objectives	8
1.3.1 Main Objective	8
1.3.2 Specific Objectives	8
1.4 Research Questions	8
1.5 Significance of the Study	9
1.6 Scope of the Study	9
CHAPTER TWO	10
LITERATURE REVIEW	10
2.1 Definition of Concepts	10
2.1.1 Fundamental Change Management of Tanzania Revenue Authority.....	10
2.1.2 Strategies of Change Used to Implement Electronic Fiscal Devices	10
2.1.3 Models of Change Management Used by Tanzania Revenue Authority	11
2.1.4 Resistance to Change (RTC)	14
2.1.5 Overview of VAT in Tanzania	21
2.1.6 VAT Compliance.....	24
2.1.7 VAT Evasion	28
2.1.8 Taxpayer’s Training.....	30
2.1.9 Electronic Taxation.....	33

2.1.10 Electronic Fiscal Devices in Tanzania.....	34
2.2 VAT Revenue Collection since 2010/11	38
2.3 Empirical Literature Review	38
2.4 Conceptual Framework	42
CHAPTER THREE	45
RESEARCH METHODOLOGY	45
3.1 Description of the Study Area.....	45
3.2 Research Design.....	47
3.3 Target Population and Sample Size	47
3.3.1 Target Population.....	47
3.3.2 Sample Size	47
3.4 Sampling Technique	48
3.5 Research Approach	48
3.6 Unit of Inquiry and Information obtained.....	49
3.7 Data Collection Methods	49
3.7.1 Primary data.....	49
3.7.2 Secondary data.....	51
3.8 Measuring VAT Compliance	51
3.9 Data Analysis	52
3.10 Validity and Reliability of the Research Instruments	52
3.10.1 Validity	52
3.10.2 Reliability	53
3.11 Ethical Considerations	53
CHAPTER FOUR.....	55
PRESENTATION OF FINDINGS	55
4.1 Demographic Characteristics of Study Respondents	55
4.1.1 Personal characteristics of the VAT registered traders.....	55
4.1.2 Personal characteristics of the TRA officers	57
4.2 The status of EFD system on improving VAT compliance	58
4.2.1 Effectiveness of EFD machines on improving VAT compliance	59
4.2.2 Level of VAT compliant attitude.....	59
4.2.3 Level of VAT compliance among VAT registered traders	60
4.3 Quality of EFD system in sealing the loopholes for VAT evasion.....	61

4.3.1 Effectiveness of EFD system in sealing the loopholes for VAT evasion.....	62
4.3.2 Awareness of the loopholes for VAT evasion.....	63
4.3.3 Reasons that caused VAT registered traders to evade paying VAT.....	63
4.4 Capacity of the traders on the use of EFD machines	64
4.4.1 Training about the use of EFD machines	64
4.4.2 Sources of knowledge about the use of EFD machines.....	65
4.4.3 The role played by each media on providing EFD training.....	66
CHAPTER FIVE	67
DISCUSSION OF THE FINDINGS.....	67
5.1 The status of EFD system on improving VAT compliance	67
5.2 Quality of EFD system in sealing the loopholes for VAT evasion.....	69
5.3 Capacity of using the EFD machines.....	71
CHAPTER SIX	73
SUMMARY, CONCLUSIONS, AND POLICY IMPLICATIONS	73
6.1 Summary	73
6.2 Conclusion	74
6.3 Policy Implications, Limitations and Further Research.....	75
6.3.1 Policy Implication.....	75
6.3.2 Limitations of the study	76
6.3.3 Area for further research.....	76
REFERENCES.....	77
APPENDICES	87
APPENDIX 1	87
APPENDIX 2.....	93

LIST OF TABLES

Table 1.1: Value Added Tax performance, 1998/99-2002/03.	3
Table 1.2: Composition of Various Government Tax Revenues, 2004/05 – 2009/10.....	4
Table 2.1: VAT Revenue Collection in Tanzania, 2010/11-2013/14	38
Table 4.1: Personal characteristics of VAT registered traders.....	56
Table 4.2: Personal characteristics of the TRA officers	58
Table 4.3: Effectiveness of EFD machines on improving VAT compliance.....	59
Table 4.4: Response on the level of VAT compliance attitude	59
Table 4.5: Analysis of VAT compliance	60
Table 4.6: Analysis of VAT compliance using the TRA office data.....	61
Table 4.7: Response on the effectiveness of EFD system in sealing the loopholes	62
Table 4.8: effectiveness of EFD system in sealing the loopholes (TRA officials).....	62
Table 4.9: Response of VAT traders towards awareness of VAT evasion.....	63
Table 4.10: Reasons that caused VAT registered traders to evade paying VAT	63
Table 4.11: Training and capacity of using EFD machines	64
Table 4.12: Sources of knowledge about the use of EFD machines.....	65
Table 4.13: The mean score of each media.....	66

LIST OF FIGURES

Figure 2.1: Electronic Tax Register (ETR).....	35
Figure 2.2: Electronic Fiscal Printer (EFP).....	36
Figure 2.3: Electronic Signature device (ESD).....	37
Figure 2.4: Conceptual Framework	44
Figure 3.1: A Map of Morogoro Municipality.....	46

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Revenue collection is an integral component of fiscal policy and administration (Gideon & Alouis, 2013). In order to improve revenue collection, the Government necessitates payment of taxes, levies, duties and various licenses by citizens and other members of community. Tax revenue is one of the most important sources of Government income (Mohammed & Gela, 2014). In supporting this view, the International Monetary Fund (IMF) in 1989 reported that taxation is the major source of Government revenue that contributes close to 80% of total Government revenue in most of the least developing countries (Siriak, 2010). Many countries in the world improve the tax collection in order to support the Government operations ranging from administrative activities, infrastructure constructions and service provision. Therefore, an effective and efficient tax collection system improves the economic growth of any country because it yields revenue to finance expenditure of the public sector.

One of the victims of numerous economic crises that have plagued developing countries since the first oil shock in 1973 has been the tax system (Osoro, 1993). This apparent failure of the tax system led to most of the developing countries to have huge fiscal deficits in both the current and overall Government budget, particularly since the fiscal year 1978/9. Consequently, bank borrowing and external finance were sought as temporary measures to finance the deficits (*ibid*).

According to Webb (1992) in Petro (2006), more than 50% of all adjustment loans agreed for developing economies between 1979 and 1989 included condition relating to Government finances which had tax reform elements. Furthermore, Ranker (2001) in Petro (2006) argued that, under pressure from International Finance Institutions many developing countries are currently reforming their tax system to extract more revenues from citizens as aid transfers are in rapid decline.

Tanzania as one of the victims of this problem, has undergone various tax reforms in 1980s that were promoted by IMF and World Bank (WB) in order to design a tax system that is viable and able to support Government services without depending on the external funds (Jörgen, 2001). According to Gideon and Alouis (2013), these reform measures sought to revamp and strengthen revenue administration, enhance voluntary compliance, expand the tax base and address corruption-induced revenue leakage. Notable among these were the creation of Revenue Authorities, adoption of Value Added Tax (VAT) systems, shifting from Income Tax Returns to Final Deduction Systems and segmentation of the taxpayer population by treating them as distinct revenue possibilities comprising large, medium, small, and micro tax payers (*ibid*).

Based on the above background, the idea of establishing a semi-autonomous tax administration was conceived by the Government and the Tanzania Revenue Authority (TRA) was born on July 1, 1996. One of the major reforms made by the Government and the TRA after its establishment was the introduction of VAT as it was recommended by IMF, WB and Tax Commission, appointed by the Government of Tanzania in 1991. Based on the view of Tax Commission report of 1991, VAT was commented to be the type of tax which will bring more businesses into the tax system unlike sales tax, stamp duty and entertainment tax which brought into a tax system for only manufacturers and importers leaving large portion of the Gross Domestic Product untaxed (URT, 1991a). Also the report argued that, VAT will reduce the economic distortion because it will ensure that the decision made by the producer as well as consumer in the allocation of limited/scarce resources will base on the economic situation and not tax consideration (*ibid*). Doubts came up whether this tax would work in Tanzania given our economy that is mainly based on the Agricultural sector and the attitudes of non-compliance amongst most of the business community body in Tanzania. Despite of that, the Government of Tanzania accepted the recommendation and in May 1992 formally reached a decision to introduce VAT in Tanzania (Petro, 2006).

In the 1996/1997 Budget session, the Government announced its intention to introduce VAT in Tanzania (Emmanuel, 2009). The VAT bill was gazetted on March 14, 1997 and was presented to the Parliament for first reading during the April 1997 session. The VAT was introduced in Mainland Tanzania on 1st July, 1998 in order to replace sales tax which was introduced in 1969. The sales tax was the most important source of income for the Government in 1980s but became less important in the 1990s (Jörgen, 2001). VAT also replaced Hotel Levy, Entertainment Tax and Stamp Duty. It was anticipated that more revenue will be generated with VAT, as the VAT base is significantly broader than the sales tax (*ibid*). The main reason of introducing VAT was to expand the tax base in order to enhance revenue collection, to attain economic neutrality, to promote export, to attain its administrative advantages, and reduce tax evasion and avoidance among the tax payer. Tanzania opted for single rate of VAT that is 20% form when VAT was introduced on July 1998 to June 2009, but the rate was reduced to 18% with effect from July 2009 (Siriak, 2010).

Godwin (2003) in Petro (2006) and Marandu (2004) pointed out that, the performance of VAT in the first six months after its introduction was very encouraging, basing on a comparison of actual collection against estimated, and comparison with collections from replaced taxes during the similar period in the previous years. The VAT collection suddenly dropped during the third year of its implementation as shown in Table 1.1. TRA made the review on the performance of VAT and the proposed strategies in which one of them was the introduction of VAT in petroleum products which made this tax to increase from the fiscal year 2001/02.

Table 1.1: Value Added Tax performance, 1998/99-2002/03.

	In millions of TZS.				
	1998/99	1999/00	2000/01	2001/02	2002/03
Total VAT Revenue	234,605.4	254,181.2	231,120.9	339,950.5	431,237.0

Source: Marandu, 2004; Petro, 2006; TRA Monthly Revenue Report.

Emmanuel (2009) attested that VAT performance is analyzed by looking at its target and actual performance. VAT Department was able to achieve its target during the year 2001/02 since TRA was established. Furthermore the report of Curtis, Ngowi and Warris (2012) indicate that, in the period between the fiscal years 2004/05-2009/10 VAT has contributed the highest share of total tax revenue collected (above 30%). However, the trend of contribution tends to decline over the period between 2004/05 and 2009/10 as shown in Table 1.2.

Table 1.2: Composition of Various Government Tax Revenues, 2004/05 – 2009/10

Year	VAT	Income Tax	Excise Duty	Import Duty	Other Taxes	Total
2004/05	42.2%	27.7%	14.7%	6.4%	9.0%	100%
2005/06	41.3%	28.5%	13.4%	9.8%	7.0%	100%
2006/07	32.9%	28.3%	20.6%	9.6%	8.6%	100%
2007/08	31.0%	29.3%	19.7%	8.6%	11.4%	100%
2008/09	30.5%	30.4%	18.8%	8.9%	11.4%	100%
2009/10	30.5%	29.5%	20.1%	8.5%	11.4%	100%

Source: Curtis *et al*, 2012; Ministry of Finance (MoF), 2010/11.

Also from the study conducted by Bevan (2012) based on the TRA's own computation, and looking at the average over 2006/07 –2009/10, the overwhelming bulk of the tax revenue losses were on VAT (57%) and Import Duty (41%). This shows that, the Government of Tanzania was losing a lot of revenue from VAT due to incompetent methods of VAT collection. According to Bird and Zolt (2008), poor technology in taxation is one of the major causes of tax revenue loss in developing countries, Tanzania included. Also the study of Kerver (2008) indicated that, having modern VAT collection and revenue regulations via technology will increase VAT collection in African countries, Tanzania included.

This trend of VAT contribution as well as the tax revenue loss is worrying and requires a serious intervention reform. The Tanzanian government through TRA became aware that using technology for collection of tax will enhance the Government's revenue position as well as reducing the degree of tax evasion and it started by making laws and regulations concerning Electronic Fiscal Devices (EFDs) in the year 2009. TRA has since introduced several reforms in order to improve revenue collection including the introduction of EFD to the VAT registered traders in July 2010.

The EFDs have been introduced to VAT registered traders under the "The Value Added Tax (Electronic Fiscal Device) Regulation, 2010" - Subsidiary Legislation, Government Notice No. 192 published on May 28, 2010, and enshrined in the Finance Act 2010 with the main aim of enhancing VAT compliance in Tanzania. TRA's new EFD system became effective on July 1, 2010 (Dickroman, 2013). The success of EFDs in Tanzania was questioned during the initial stage of implementation. This is because, the use of EFD machines received wide spread rejection by traders country wide (Mbago, 2014). Most of the businesses were closed to protest against the use of EFDs.

The EFD system is fully funded and facilitated by TRA. The TRA finance the purchase of EFD machines and other fiscal devices. However taxpayers were required to install the machines and claim these machines as the input tax. The refund or claim was restricted to the EFDs installed or interfaced with the existing systems. A taxpayer with more than one point of sale example branches was refunded for all the machines and devices purchased for use in the business.

One of the strategies deployed by TRA to implement EFD project was to make registration of all devices before they are put into use by VAT registered traders (Pandu, 2012). The registration procedures involved the application for registration to TRA offices by the approved suppliers for every device sold. Upon satisfaction by the content of the application a User Identification Number (UIN) is issued by TRA (*ibid*).

Currently the use of EFDs across the country is increasing and the TRA is on the second phase of implementation to cover Non-VAT registered traders with a turnover ranging from TZS 14 million and above per annum (Mbago & Lisley, 2014). The growing willingness of businesses to use EFDs is a direct result of awareness campaigns along with enforcement efforts conducted by TRA throughout the country. The TRA Director for Tax Service and Education, Richard Kayombo, said now traders are better informed, response to the use of machine by the business community's is very positive (Mbago, 2014).

Considering the significance of VAT administration in developing countries, previous literatures on VAT administration focus on the VAT administration tasks and its problems (Abraham, 2003; Kerver, 2008; Taye, 2011). Other studies put their attention on the laws and practices used in administration of VAT exemption (Nkane, 2010), factors influencing compliance to VAT payment (Siriak, 2010), and the management of VAT in Tanzania (Petro, 2006). It must be acknowledged however, that Tanzania has undertaken major efforts to enhance VAT collection by providing education to the taxpayer's in order to improve voluntary VAT compliance and making several reforms on the laws governing the issues of VAT in Tanzania (Machogu & Amayi, 2013). Horn (2003), Mmanda (2010), Clive (2011) and Fuke (2013) in the study of Ikasu (2014) who have done the similar study on EFD machines have tried to describe the principles, benefits, advantages and disadvantages, as well as strategies of implementing the use of EFD machines. Therefore there is a necessity to research on the influence of EFDs on VAT collection so as to ensure EFD system achieve the objectives intended by the government of Tanzania.

1.2 Statement of the Problem

Electronic Fiscal Devices (EFDs) in Tanzania were introduced with the main objective of tightening grip on revenue source. The EFDs helps TRA to establish the amount of VAT that should be paid by the VAT registered trader without crosschecking the records (Naibei, Siringi & Musonera, 2012). Previously the Authority was losing a lot of revenue because the system used were prone to falsification. There was a concern from TRA that most of the VAT registered traders were undervaluing their sales in order to evade paying tax. Other challenges faced were sales that were not updated, a lot of paperwork, conflicts between the taxpayers and TRA officers and delayed audit reports among others (Weru, Kamaara & Weru, 2013). In the Finance Bill of 2010, the Minister of Finance and Economic Affairs through the amendment in the VAT Act required that all VAT registered traders should use the EFD machines with effect from July 1, 2010. The statistics showed that the use of EFDs doubled the revenue collection by the increase of 59% between July 2010 and June 2013 (Mbago, 2014).

In August 2014, the TRA in collaboration with the Police Force launched an inspection campaign on the use of EFDs among the traders countrywide and they discovered that most of the traders haven't procured the devices, some are using fake EFDs (unregistered devices by TRA), forgery receipts are issued by traders, and some have bought the devices but they are not using those devices properly (Raphaely, 2014). The traders who were caught from this inspection as well as those who were mobilizing other traders to protest against the use of EFDs by any means faced the legal measures because they are against the law. A number of traders countrywide reached decision to close their business for a couple of days to protest against the use of EFDs following the inspection campaign launched by TRA and Police Force.

As EFDs had been recently introduced by TRA, there could be problems related to the skills of handling the machines, the affordability of installation costs, maintenance cost and annual checkup costs that could be linked to the taxpayers (Mohammed & Gela, 2014). The costs of installing and operating the machines will be expected to be correlated with the benefits accruing to their use and comparatively lower than those

incurred in the earlier system. According to Naibei *et al.* (2012), the gadget had failed in 21 countries because there was a fear that accurate records could not be kept with the devices because there is no provision for return of goods and services. Furthermore, Martin, Obongo and Magutu (2010) argued that, traders claim that there were punitive operating expenses that the tax authority is unwilling to bear besides the actual cost of the machines. Therefore these problems may result to a decrease of VAT collection percentage. Based on these challenges TRA embarked on the 4 years project by introducing the EFD system. This research aims to find out if these EFDs have enhanced VAT collection among the VAT registered traders in Morogoro Municipality, Tanzania.

1.3 Research Objectives

1.3.1 Main Objective

The study's main objective was to: assess the influence of EFDs on VAT collection among the VAT registered traders in Morogoro Municipality, Tanzania.

1.3.2 Specific Objectives

The specific objectives of the study were to:

- i. Explore the status of EFD system on improved VAT compliance in the study area.
- ii. Assess the quality of EFD system in relation to sealed loopholes of VAT evasion in the study area.
- iii. Investigate capacity of the VAT registered traders on the use of EFD machines.

1.4 Research Questions

The research questions of the study were:

- i. Does EFD system improve VAT compliance among the VAT registered traders?
- ii. Is EFD system effective in sealing the loopholes for VAT evasion?
- iii. Does training offered to VAT registered traders about the use of EFD machines adequate and effective?

1.5 Significance of the Study

This research shed light on the importance of using EFDs in taxation in order to improve efficiency and effectiveness in VAT collection. As it is more likely Tanzania depends more on VAT as one of the major source of income, therefore this research has been designed in such a way that its findings will be imperative to TRA officers, tax payers, academicians and other policy makers in the following ways; plan for the better utilization of EFD machines to improve efficiency and effectiveness in VAT collection, identify the possible problems that hinder effective use of EFD machines and find possible solutions for the problems, create basis for the formulation of proper EFD policies and strategies for taxation industry in Tanzania and finally the study is generally aimed to contribute knowledge in the area of EFD machines in taxation industry in Tanzania.

1.6 Scope of the Study

This study covered the period of four (4) years from the year 2010 to the year 2014 and it involved the VAT registered traders in Morogoro Municipality and the TRA officers who are working at Morogoro regional office.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definition of Concepts

2.1.1 Fundamental Change Management of Tanzania Revenue Authority

In this era of globalization, organizations need to administer changes in order to survive and grow. Change is an inherent characteristic of any organization whether it is public or private sector must change in order to remain relevant. While there have been various factors that force organizations to change, developments in technology and globalization are some of the main factors that necessitate organizations to revise the way they conduct their operations (Champy & Nohria, 1996; Kebapci & Erkal, 2009). According to Armstrong (2006) the contribution of human resource (HR) will often take the right tasks, structures, processes and systems to support change. Therefore, fundamentally, it is a process that involves effective people management. TRA as one of the important organizations in Tanzania, it has undergone many changes in order to increase VAT collection. Introduction of EFDs is the one of the major changes made by the TRA. Change is a continuous process that can be implemented in phases and requires constant reviewing (Weru *et al.*, 2013). TRA has implemented EFDs in phases in which currently it is on the second phase of implementation. Also TRA is reviewing the performance of EFDs by preparing the EFDs compliance monitoring progress report (Acquisition and usage) every month.

2.1.2 Strategies of Change Used to Implement Electronic Fiscal Devices

Swanson (1997) in the study of Weru *et al.* (2013) argued that, selection of a strategy for implementing the change technique has consequences for the final outcome. The change process is likely to be time consuming and the organization will have to consider the type of change strategy best suited to pursue the organization's new direction. Few organizational change efforts tend to completely fail due to the wrong choice of the change strategy. Some organizations have not tried to initiate needed changes because the managers involved are afraid on what kind of the strategy should be used so that the end result of change will be successful.

The major three strategies of change are unilateral authority, shared authority, and delegated authority. The organization should select the mostly appropriate change strategy so as to minimize the resistance to change (RTC). The strategy which emphasizes shared authority has the greatest likelihood of minimizing RTC, as it involves the participation of superiors and subordinates in the entire process (Weru *et al.*, 2013). TRA used shared authority as it allows the involvement and participation of all stakeholders. Several times, Tanzania Business Community met with TRA to discuss on the EFDs standoff. The meeting involved representatives from across the country. For example during the protest that occurred in September 2014, there was a committee of five people from Tanzania Business Community who worked together with TRA in addressing the challenges facing the use of EFDs (Raphaely, 2014). Also when visiting Karatu District in April 2014, President Jakaya Mrisho Kikwete told the TRA management to hold a discussions with traders and find solutions together to the issues they have raised (Kisembo, 2014). This shows that, the users of EFDs are empowered and feel that they own the process because they are involved in decision makings.

2.1.3 Models of Change Management Used by Tanzania Revenue Authority

Nevertheless, all changes regardless of the type, involve adopting new mindsets, processes, policies, practices, behaviour or change the old ways in which things were done or operate and adjusting to the new ways (The Queensland Government, 2007). These changes are feared by people but provide the new hope. For the changes to succeed, the positive side should outweigh the negative side. In Tanzania, when EFDs were introduced in the year 2010 the Business Community rejected countrywide because they were afraid that these machines will affect the primary source of their income. The change model used by TRA to implement EFDs in the year 2010 is a three step model of Kurt Lewins, Bridges theory and Armenakis behavioural view of 1999.

Kurt Lewin's Classical Model of Change Management

The classical model of Kurt Lewin's was created in 1950s by psychologist Kurt Lewins (Stroh, 2005). He noted that the majority of people tend to prefer and operate within certain zones of safety. He recognized the three stages of change which are unfreezing, movement, and refreezing (*ibid*). Unfreezing is the first stage in which the problem or the event needs to be presented to the people so that they recognize that there is a need of change. Most of people make an active effort to resist the proposed change in this stage. The second stage is a movement in which new things are started to be implemented. Adequate leadership and reassurance is necessary for the process to be successful. The last stage is the refreezing in which change has been accepted and successfully implemented, the organization become stable again, and refreezes as they operate under the new guidelines (Normandin, 2014). During the initial stage of EFDs implementation, the VAT registered traders protested and went to the streets protesting against the use of EFDs. Based on Lewin's perspective, this is the unfreezing stage. After this stage, TRA in collaboration with the Government made the intensive techniques to make sure that the VAT registered traders use the EFD machines. This stage is the same as the movement stage of Kurt Lewins model. Currently VAT registered traders are in the new system of collecting VAT. This is the refreezing stage in which the VAT registered traders have realized the benefits of using EFDs and they have accepted the new system.

William Bridges Transitions Model of Change Management

According to Bridges' theory, change is situational; transition, on the other hand, is a psychological, three-phase process that people go through as they internalize and come to terms with the details of the new situation that the change brings about (Bridges, 2003). The first stage of change is Ending, Losing and Letting Go. This is a stage of helping people deal with their tangible and intangible losses and mentally prepare to move on. This stage is often marked with resistance and emotional upheaval, because people are being forced to let go of something that they are comfortable with (*ibid*). The second stage is the Neutral Zone. The neutral zone is that in-between place where one

loses the sense of relatedness and purpose, because much of one's identity is tied up in the old way of life (*ibid*). In this stage, people affected by the change are often confused, uncertain, and impatient. The last stage is the New Beginning. In this stage people are building the skills they need to work successfully in the new way, and they're starting to see early wins from their efforts (<http://www.mindtools.com/pages/article/bridges-transition-model.htm>). At TRA, with the introduction of EFDs machines, VAT registered traders were very aggressive to the TRA staff and they were afraid that their business will collapse. This stage followed by the confusing and lack of trust that EFDs whether it will work effectively in Tanzania and many VAT registered traders were struggling to find the new path. Currently, VAT registered traders are silent and committed to use EFDs as the new way of collecting VAT. This gives evidence that, the TRA have adopted the Bridges' theory of change management.

Armenakis Theory of Change Management

According to Armenakis, Harris, Cole, Fillmer, and Self (2007), change is the cognitive precursor to the behaviours of either resistance to, or support for, a change effort. The study further argued that the management will convince about the need for change through the persuasive communication channel. According to Armenakis, Harris and Feild (1999) and Burris (2008) in developing a model to consolidate theory and research, held more closely to Lewin's original description, describing change as a three-stage process that includes readiness, adoption, and institutionalization. Armenakis *et al.* (2007) relied much on the existing research to develop this theoretical change model. Readiness occurs when the environment, structure, and organizational members' attitudes are such that employees are receptive to a forthcoming change (Holt, Armenakis, Harris & Field, 2007; Burris, 2008). When the organizational members temporarily alter their attitudes and behaviours to conform to the expectations of the change (Holt *et al.*, 2007; Burris, 2008) the organization is considered in the adoption stage. The organizational change is considered to be in the institutionalization phase when the change becomes stable (Holt *et al.*, 2007; Burris, 2008). When considering the case of TRA in the perspective of this theory, the TRA employees as well as the VAT

registered traders were sensitive about the introduction of EFDs. They were sensitive through the persuasive communication made by TRA management such as orally, written, active participation and management of external sources. They have gone the process of adoption after they have resisted and lastly accepted to use EFDs. This is the adoption stage of Armenakis theory. Finally they have institutionalized the use of EFD because currently it is illegal to do any transaction without using the EFD machines. The traders are obliged to issue the EFD receipt after the transaction. If caught the VAT registered trader will face the legal measure because it is against the law. This gives the evidence that, TRA has adopted Armenakis theory of change management.

2.1.4 Resistance to Change (RTC)

While transforming organizations from one phase to another, management needs to understand that their stakeholders have their own existing roots according to which they may respond differently. According to industry experience and research, organizational members cope with change by passing through denial and resistance (Mushtaq, 2013). According to Pardo and Fuentes (2013), RTC is an essential factor to be considered in any change process, since a proper management of resistance is the key for change success or failure. By RTC, we understand any phenomenon that hinders the process at its beginning or its development, aiming to keep the current situation. From the study of Kebapci and Erkal (2009), one may list various causes for failures in change initiatives whereas during their study on change management, RTC has been one of the most salient elements of those unsuccessful attempts. This fact was also revealed in the study of Maurer (1996) in Muo (2014) which indicates that between 50-66% of all major corporate change efforts fail and that RTC is a critical factor in those failures.

RTC comes in different ways or can be classified severally Piderit (2000) classified RTC into three as behavioural (intentional actions, inactions, behaviours, commissions), emotional (aggression and frustration, which may affect the behaviour) and cognitive (negative thoughts about the change, reluctance). Davies (1977) in Muo (2014) on the other hand acknowledges two types of RTC: rational opposition to change based on reasonable analyses which determine that costs are greater than benefits and RTC based

on emotionalism and selfish desires that ignores benefits to others and as such is less desirable to organizations.

Change may seem perfectly acceptable in written papers or oral discussions but people usually tend to resist change. Lewin (1947), the grand-father of change management studies, believes that change initiatives always encounter strong resistance, even when there is general agreement on the goals of the initiatives; and that organizations are naturally highly resistant to change due to the human nature (behaviour, habits, group norms) and organizational inertia. Pryor, Tanja, Humphreys, Anderson, and Singleton (2008) insist that resistance is a normal reaction to change and should be expected, a view similar to that of Kohles, Baker, and Donaho (1995) who aver that transformational organizations should recognize normal resistance and plan strategies to enable people to work through it. Undoubtedly, RTC is a key topic in change management and should be seriously considered to help the organization to achieve the advantages of the transformation.

Reasons that Cause Resistance to Change

Research scholars have investigated and analyzed many organizations passing through the change process and have provided the reasons for resistance to organizational change (Mushtaq, 2013). Understanding the most common reasons people object to change gives the organizational management the opportunity to plan the change strategy to address these factors. During the introduction of EFDs, most of the businessmen and the service providers resisted on this new system of collecting VAT. In February 2014, many shops in Dar es Salaam's Kariakoo, Mwanza, Morogoro, Mbeya and Kagera regions remained closed for at least two full days, that being one of the many previous protests against the EFDs (Mbago, 2014). Their main demand to TRA was the improvement on the machines and the overall tax system in Tanzania. In the study of Weru *et al.* (2013), the reasons for RTC include among others: lack of conviction of need for change; dislike of imposed change/no involvement in the change; dislike of surprises/no information for readiness, fear of the unknown, and uncertainty; reluctance to deal with unpopular issues; fear of inadequacy and failures due to need for new skills;

disturbed practices, habits, relations and familiarity; and lack of respect and trust in persons promoting change.

Muo (2014) argued that individuals will resist change if and when there are threats of reducing the level of their income, economic insecurity, fear of the unknown, uncertainty, failure to be recognized or be informed about the need for change, cognitive dissonance caused by new people, processes, technology, expectations, incapable or unwilling to learn new skills or feels. Other factors that lead to resistance include ambiguity that relates to goals, methods, data and criteria, anxieties and uncertainties, sundry inconveniences and disruption of informal social bonds, the influence of unions and professional associations, hostility caused by NIH (Not invented here) mentality; resistance to the change agent, poor articulation of the programmes, and change fatigue (*ibid*).

Negative Impact of Resistance to Change

RTC is a contentious and paradoxical concept (Muo, 2014). Robbins and Finley (1997) argue that because change outcomes are always disappointing, participants lower their expectations, dig in and stop changing. People hate change because it is always painful even when self-administered (*ibid*). It is generally perceived that resistance is the greatest impediment to change management especially as it introduces costs and delays that are difficult to anticipate but must be accommodated (Pardo & Fuentes, 2013). Resistance evidenced the emergence of divergent opinions, the root of conflicts, and is thus undesirable and detrimental, and should be uprooted. The impact of RTC is thus obviously negative and destructive. It leads to truncation, sub-optimal outcomes or outright failure of the change programme (Muo, 2014). Belcher (2014) argued that, RTC lowers morale, lessens efficiency, disrupts work environment and leads to losses in the organization and in some cases it may cause an organization to collapse.

In Tanzania, the slight decrease in Government revenue collected during the month of December 2013 was partly caused by the resistance in the use of EFDs by some taxpayers and other internal measures; the Bank of Tanzania (BOT) has said (Andrew, 2014). Revenue collected by the central Government was only TZS 939.4bn/-, falling short of target by 20.6%. The BOT said in its Monthly Economic Review that observed under performance in Central Government revenue was partly explained by resistance in the use EFDs by some taxpayers and delays in the implementation of some revenue measures (*ibid*).

Lamenting the ongoing EFDs controversy in September 2014 with some traders across the country intermittently closing down their businesses in protest against use of the devices, The TRA Director of Taxpayer Services & Education, Richard Kayombo, said of the protests go on, they are bound to have an adverse impact on revenue collections (Kazingumbe, 2014). Also there was conflict between the traders and the TRA officers especially during the inspection campaign launched by TRA in collaboration with the Police Force.

Also in March and April 2015 there was a national strike in Tanzania which was caused by the court which kept the national leader of traders' community, Johnson Minja in remand. The leader was charged with inciting traders not to pay tax using EFDs (Rweyemamu & Mbago, 2015). This led to the disturbances of many people who wanted to get services from traders as well as traders from neighbouring countries who came shopping in Tanzania especially in Dar es Salaam were also stranded following the boycott (*ibid*). The national wide strike by business community was called off after the national leader was released on bail, ending an almost a week-long scuffle by traders pressing for release of their embattled leader. Also the Members of Parliament pressed for the release of Minja so as to end the boycott by traders and pave the way for talks between the Government and traders over EFDs which are a bone of contention. This gives evidence that, RTC has the negative effect.

Positive Impact of Resistance to Change

In the late 1940s and 1950s, RTC had been identified as an important obstacle for implementation, and this perception is still preserving its validity (Kebapci & Erkal 2009). The negative coloration of RTC is being challenged and several authors are urging a serious rethink of the tendency to see resistance as evil and acceptance as good (Muo, 2014). Hultman (1979) belongs to this school and regrets that whenever resistance is mentioned, there is the tendency to ascribe negative connotations to it but that is a misconception because there are many times when resistance is the most effective response available. Kotter, Schlesinger, and Sathe (1986) are also of the view that existing managerial mindsets create an image problem for the concept of RTC. Classical organizational theory has had a big impact on this general tendency to see resistance as a problem which needs to be eliminated. This perspective, which is objective and more positive, views RTC as a natural, acceptable phenomenon and holds that depending on the nature, environment and conditions of change, RTC is not always negative. Managers believe that a change process with minimal resistance is good and well- managed. This mindset casts resistance in a negative light as the enemy of change, the foe which must be overcome if a change effort is to be successful (Muo, 2014).

One of the positive impacts of RTC has been considered as a source of information (Pardo & Fuentes, 2013). During the various protests which occurred in Tanzania, there was a flow of information from the traders to TRA and from TRA to the traders. This led to the growing willingness of business community to use EFDs (Mbago, 2014). As a result, between July 2010 and 2013 the TRA revenue collection increased by 59% (*ibid*). This gives evidence that, RTC can have a positive impact to organizations.

Efforts Used to Manage Resistance to Change

Schermerhorn, Hunt, and Osborn (1994) list six methods of managing resistance as education and communication, participation and involvement, facilitation and support, negotiation and agreement, manipulation and cooperation and implicit and explicit coercion. Other methods of managing RTC is obtaining feedback, and softening emotional or rational resistance including attitude transformation, changing group affiliation, getting the people involved and giving them stakes in the change, effective communication, organizing for change, ensuring that the change passes the basic cost-benefit test, managing the learning process, endangering hope, inducing a change friendly attitude and providing psychological safety for stakeholders while the change process is in progress (Muo, 2013; Muo, 2014). Of course, the best method to be used will depend on the circumstances and most often, a bouquet of measures will be used simultaneously (Muo, 2014).

TRA minimized RTC by doing the following (Bashiru, 2014);

- i. TRA conducted a lot of seminars and workshops to its staffs before the introduction of EFDs to the VAT traders in the year 2010. This helped the TRA staffs to be aware of the changes and this resulted to the changes of structure, behaviour among the staffs and the overall tax system of TRA. Also the staffs were involved in planning and implementation of this process. This allows employees to play a part in the process which reduces psychological uncertainty and insecurity.
- ii. TRA does not use the threaten tactics during the introduction stage of EFDs. The TRA officers were trying to explain on how these machines were going to benefit the economy of the country as well as the usefulness of these machines in keeping the accurate records for the business.

- iii. Social relationships among individuals are very important and it should not be affected by the change. People are normally motivated to resist change if that particular change will affect their social relationship. During the implementation of EFDs, TRA make sure that the new system does not change the relationship that existed before between the TRA officers and the taxpayer.
- iv. TRA implements EFDs in phases. The main reason of doing this is to enables TRA to test their own reactions and obtain more facts about the new system. It also helps TRA to unfreeze attitudes and encourages people to think objectively about the proposed change. The TRA involve all stakeholders in all phases of implementation.
- v. TRA conducted various awareness campaigns to increase the knowledge of business communities across the country on the use and benefits of EFDs, efforts which are now bearing good results. The Taxpayer Service Officer in Morogoro Region, Mr. Bashiru said that TRA conducted a number of workshops with members of the Business Community on the importance of the EFDs and the response was increasingly positive. The TRA used the case studies of the early adopters of EFDs to educate the business community and lastly it motivated the other traders to use these machines.
- vi. TRA made some adjustment on the acquisition of EFDs. One of the major reason mentioned by traders during various protests that have occurred in Tanzania is that the cost for acquisition of EFDs is very high. Therefore the adjustment made is that the trader can claim these machines as the input tax. This means that, the first actual cost of acquiring EFD shall be offset from the output tax upon submission of the VAT monthly return. The cost set off will continue until the entire amount is exhausted.

2.1.5 Overview of VAT in Tanzania

In every step of production or sale there is an addition to the value of goods or services. This value is what is subject to tax. Therefore VAT is a consumption tax charged on taxable goods and services whenever value is added at each stage of production and at the final stage of sale by any business that is registered for VAT purpose (<http://www.tra.go.tz/index.php/value-added-tax-vat>). This tax is also charged on all taxable import made by persons whether or not registered for VAT and the procedures applicable under the Customs Laws for imported goods shall apply in respect of VAT on imports (Marandu , 2004). VAT plays an important role in the economic development of a country by influencing the rate of production and consumption (Khan & Shadab, 2013). This tax proves to be an efficient tool for revenue collection, its performances, therefore, has direct impact on fiscal mobilization, macroeconomic stability and development (*ibid*).

Qualification for VAT Registration

Any person conducting a business whose taxable turnover exceeds or is likely to exceed TZS 40 million in a period of 12 consecutive months or TZS 10 million in a period of 3 consecutive months is obliged to register as a taxable person. Such person shall make application to be registered within thirty days of becoming liable to make such application (<http://www.tra.go.tz/index.php/value-added-tax-vat>). The person for VAT purpose can be a sole proprietor, company, partnership or joint venture, deceased estate or insolvent estate; trust, a club or society, a corporative, an association or, any other body of person. However, where the Commissioner is satisfied there is good reason to do so, on grounds of national economic interest or for the protection of the revenue, he may register any person, whether or not an application to registered has been made and regardless of the taxable turnover of the person. Apart from registering also the taxpayer is required to buy EFD machines and put into use.

Advantages of VAT

Oakland (1992) in Petro (2006), showed that VAT has the advantage that it cannot distort domestic production or distribution. Therefore under VAT system, there is no difference as how often the product/service is traded before it reaches the final consumer. Also VAT can increase more revenue at lower uniform rate and fight against tax evasion because tax payers have to keep good records both for purchase and sale (*ibid*). Thirdly, it promotes export because normally exports are zero rated. According to Rayundu (1985) in Petro (2006), VAT avoids taxing investment and encourages the acquisition and production of related goods and also ensures that an input is only taxed only once thereby bringing more businesses into the tax net and spreading the tax burden equitably.

Disadvantages of VAT

Hossain (1995) in Petro (2006) argued that, VAT does have the disadvantage of increasing administration and compliance costs. These costs increase due to the fact that the administration of VAT is more complicated and expensive because of multistage collection points and every taxpayer has to file returns on a fixed period, normally monthly. Other disadvantages of VAT are that VAT is a fuel of inflation, it falls heavily on the low income households than high income households and VAT rate ignores equality (Marandu, 2004).

Challenges of Collecting VAT in Tanzania

VAT revenue is one of the most promising incomes that the Government depends largely on for its budgets (Brew & Wiah, 2012). Clearly TRA is facing many challenges in collecting VAT and this leads to the enormous pressure the Authority faces in meeting the target. These challenges are the resources constraints, skills gap especially to the TRA staffs, high compliance cost which have the negative impact on compliance and encourage tax evasion and large size of informal sectors which means that the government is not collecting all VAT that it has to collect (Kimungu & Kileva, 2007; Hira, 2011). Other challenges are traders not having permanent business premises, the record keeping problem is mainly due to illiteracy on the part of the taxpayers, low tax

morale, weak tax administration (i.e., the incapacity of the administration to implement the tax in practice), Tanzania appear to have fragmented economies and the total distrust between tax administrators and taxpayers (Maganga, 2011).

Strategies to Improve VAT Collection in Tanzania

Chijoriga (2012) argued that, TRA will increase VAT collection if it will make some improvement on the fiscal policy, legal, regulatory framework and the business environment; broadening the tax base through the increase of the number of taxpayers and type of taxes. He further argued that, broadening the tax base through the strategies (i.e. formalization of the informal sector, improvement of the formalization of properties and business formalization (registration and licensing) and improvement of tax collection in other sectors in the natural resource such as fishing, forestry, mining and energy sectors) will enhance VAT collection.

According to Maganga (2011) enhancing audit capacity in specialized sectors, improving classification and valuation of customs data, strategies to minimize tax evasion through increasing compliance checks in real estate will increase VAT collection. Other strategies mentioned by the researcher are enhancing communication and exchange of information within TRA and with external agents (data mining, data analysis and investigation techniques), development of revenue mobilization strategy in Tanzania and taxation of the informal sector.

Hira (2011) suggested the following strategies that should be used by East African Countries Revenue Authorities, TRA included in order to enhance the VAT collection;

- i. The first thing that can happen and in some cases have happened is for them to learn from international experiences. The issues Revenue Authorities face in East Africa have all been experienced in other parts of the world in one way or another. Therefore the Revenue Authorities should send their officers abroad in order to learn new things which will enhance quality and effectiveness of Revenue Authorities. Information sharing is not the only benefit to come from this, sharing the best practices will also be a by-product.

- ii. The need for an easy ICT system and processes that are manageable should not be underestimated. As technology becomes more and more prevalent, it will help traders to save time in perusing the records and reduction in tax preparation costs. Tax refunds claims can also be handled easily and as a result reduce costs of businesses. Therefore the revenue authorities should employ the easier ICT system to encourage the traders to use it. If the system is not simple to use, it will make the taxpayers not to use it and this will encourage tax evasion and tax avoidance.
- iii. Modernization is another key aspect revenue authority in East Africa should think about. Apart from technology, they must seek to structure themselves in such a manner that they are able to maximize compliance and so collections. The use of segmented approach is very important in the East African Countries. This segmenting will ensure that focus on groups of taxpayer is correct as clearly different segments of the markets and industry will have different idiosyncrasies.
- iv. Finally, while this may not be in purview of revenue authorities, the need for revenue legislation reform is overdue. Much of the region relies on old colonial legislation that is outdated and has no concept of what it is to conduct business in 21st century. Ambiguous and non-user friendly law simply makes life more difficult to enforce and collect taxes.

2.1.6 VAT Compliance

VAT compliance is a degree to which a taxpayer complies with the tax rules of his country, for example by declaring income, filing a return, and paying the tax due in a timely manner (<http://www.moneycontrol.com/glossary/taxes/tax-compliance.html>). It has never been easy to persuade all taxpayers to comply with the requirements of a VAT system. VAT compliance is likely to become a more significant aspect of tax policy as most of the old problems remain and new considerations are raised by developments such as self-assessment, the emergence of the global economy and electronic commerce (James & Alley, 1999).

Indicators of Voluntary VAT Compliance

VAT compliance level can be identified by looking on the compliance indicators; here one can examine the percentage of the VAT revenue to the GPD (Machogu & Amayi, 2013). An increased percentage of VAT revenue in relation to the GDP signifies an increase in the level of VAT compliance. Public opinion indicators are the perceptions of people towards the taxation systems and taxes (*ibid*). Other compliance indicators are; percentage of income that is reported for the taxation purposes and the programme impact indicator. Here, one may assess the impact of specific programmes or initiatives on the VAT compliance as well as behaviour of the target taxpayer population (Machogu & Amayi, 2013).

Another approach is to examine the trend, in the compliance aspects, for example registration, and filing of the return, correct reporting of the income and expenses, as well as the payment of the correct amount of VAT. The trends should be examined or compared on the basis of percentage, rather than additional revenue generated, by application of the specific compliance strategy or comparing the percentage of VAT revenue collected through enforcement activities such as audit, penalties and fines, to the total revenue collected, with that paid voluntarily.

Factors Affecting VAT Compliance

There are two broad approaches to the problem of VAT compliance that is the one developed from economic rationality, using the economic analysis, while the second is concerned with behavioural issues and draws heavily on concepts and researches from other disciplines, such as psychology and sociology (Machogu & Amayi, 2013). The economic approach identifies economic factors that affect the VAT compliance behaviour which are as follows (*ibid*);

- i. Financial burden: there appears to be a relationship between the amount of tax owed and compliance behaviour. For example if a business owner has a tax liability that can easily be paid, he/she may be willing to comply. However if the liability is large, potentially threatening the viability of the business, the owner

may avoid paying it or trying to adjust the data reported so as to incur a smaller (but incorrect) tax liability.

- ii. **The costs of compliance:** costs of compliance are the common costs a taxpayer has to incur in complying with tax obligations for example, time taken to complete tax returns, costs of hiring tax accountants, psychological costs such as stress, arising as a result of uncertainty that one is not sure that he/she has met all of the tax rules. The list is not exhaustive. The higher the compliance costs, the higher the chance of non-compliance.
- iii. **Incentives:** giving taxpayer incentives may have a positive effect on tax compliance.

Behavioural scholars identified behavioural factors that affect the compliance behaviour as follows (Machogu & Amayi, 2013);

- i. Individual differences for example, gender, age, education level, moral compass, industry, personality, circumstances and personal assessment of risks.
- ii. Perceived inequity tax payers who believe the system is unfair, or who have personal experiences of unfair treatment are less likely to comply.
- iii. Perception of minimal risks: - if a taxpayer has the opportunity not to comply, and perceives that there is only a minimal risk of being detected he/she will take the opportunity.
- iv. Risk taking: - some people view tax avoidance/tax evasion as a game to be played on and on. They would like to test their skills in avoiding being caught.

In addition to the above factors, VAT compliance attitude of the taxpayer is also affected by the factors from the external environment of the taxpayer, for example, the nature of the business, industry and economic conditions prevailing on the market such as demand and supply. These are the factors that affect the competitive advantage hence creating a perception that non-compliance to tax is the solution. It is also affected by internal factors, such as sociological and psychological factors.

Taxpayer behaviour in response to VAT compliance

In order to understand taxpayers' compliance towards effective introduction of EFD machines, it is very important to describe how traders behave toward the institution and implementation of EFD machines. Taxpayer behaviour in response to VAT compliance can be described through five theoretical foundations 'schools of thought' referred to as:

- i. **Economic Deterrence:** according to Backer (1968) in Ikasu (2014), the basic point advanced by theorist of this model is that, taxpayer's compliant behaviour is influenced by factors such as the tax rate, the probability of being detected and penalties imposed by the state. The economic analysis thus concludes that since compliance decisions are based on an assessment of costs and benefits, high probabilities of detection for non-compliance and large penalties for discovered violators would encourage greater compliance, hence maximizing tax revenue streams.
- ii. **Fiscal Exchange:** Moore (1998) in Ikasu (2014) suggested that, the presence of government expenditures may motivate tax compliance from the tax payers. The theory suggest that the government can increase tax compliance by providing goods and services that citizens prefer in a more efficient and accessible manner, emphasizing that taxes are necessary for the receipt of government services.
- iii. **Social Influences:** Snavely (1990) in Ikasu (2014) propounded that, human behaviour in the area of taxation is influenced by social interaction in much the same way as other forms of behaviour. Compliance behavior and attitudes towards the tax systems may therefore be affected by the behaviour of an individual's reference group such as relatives, neighbours, and friends. Social relationship may motivate an individual to comply or not to comply with the tax system.

- iv. Comparative Treatment: McKerchar and Evans (2009) in Ikasu (2014) attested that, individuals are more likely to comply with rules if they perceive that the system determining those rules is impartial. Citizens may not consider their relationship with the state in a vacuum where both parties are actors. Likewise, they may not think about their fellow citizens without considering their own relationship with the state (Ikasu, 2014).
- v. Political Legitimacy: according to Tayler (2006) in Ikasu (2014), legitimacy is described as belief or trust in the authorities, institutions, and social arrangements to be appropriate, for the common good. According to the political legitimacy theory, tax compliance is positively related to perceptions about the government's trustworthiness.

2.1.7 VAT Evasion

The term "VAT evasion" refers to illegal and intentional actions taken by individuals or firms to reduce their legally due VAT obligations (Alm, 2012; Faridy, 2013). It is illegal, unethical, uneconomical and highly risky since it may result in penalty, imprisonment and closing up of business. VAT evasion is an objective problem which affects every tax system, therefore the fight against VAT evasion is major concern of all Governments especially in developing countries (Adebisi & Gbegi, 2013).

Techniques of VAT Evasion

The following are some common examples of VAT evasion (Keen, 2007; Faridy, 2013):

- i. Traders may fail to register for the VAT.
- ii. Making a false statement in a return affecting VAT liability.
- iii. Giving false information on any matter affecting VAT liability.
- iv. Preparation or maintenance of false books of accounts or records.
- v. Application of fraud e.g. manipulation of stock sheets and valuation, destruction of or defacing of accounting records, non-issue of sales receipts etc.
- vi. Traders may reduce their tax payments by misclassifying sales into the category subject to a lower rate (or zero rate) of tax or evade VAT by abusing the credit and refund mechanism.

Causes of VAT Evasion

Any attempt to evade VAT may be caused by any one or combination of the following factors (Taye, 2011; Juma, 2014);

- i. High rates of taxation: - prevalence of high rates is the first and foremost reason for tax evasion. This is because (1) the higher rates of taxation create a psychological barrier to greater effort and undermine the capacity and will to save and invest; and (2) higher tax rates results in heavy tax burden and the greater the risk undertaken for the purpose of tax evasion, the greater is the reward.
- ii. Complexity of tax laws: - complicated tax laws are another factor for tax evasion. Complex tax procedures involve a lot of time, cost, seeking the assistance of tax experts and their advice by taxpayers. Such complication in tax laws may lead the taxpayers for evasion.
- iii. Low prospect of detection and punishment of tax evaders: - the more tax evaders a person know who are not caught and punished, the more likely he/she will also join the band wagon of tax evaders (induced evasion). Where tax evaders are caught the penalty should be sufficiently deterrent. That is why a selective prosecution policy is necessary.
- iv. Deterioration of moral standards: - every person should realize his responsibility towards the Government. However, in this modern competitive world, the deterioration of moral standards among the people leads to falsification of accounts, misrepresentation of facts and fraudulent behaviour.
- v. Inadequate training and experience of tax administrators coupled with lack of exposure to business practices may limit tax officials' ability to expose complex international and intercom any tax avoidance schemes and check on stock manipulations or proper accounting in long term contracts.

- vi. Too many taxes (multiplicity of taxes) are difficult to comply with correctly due to lack of knowledge of the detailed provisions of all the tax laws, too many due dates and too much return to complete, accounting staff shortages and different complexities in the laws etc. There are more than 30 tax laws in Tanzania. There is a need to rationalize the tax regime further.

Effects (consequences) of VAT Evasion

According to Juma (2014), reduction or elimination of VAT liability results into the government revenue loss leading to non-realization of budget plans and objectives for economic and social development. He further argued that, non-realization of other non-revenue goals of taxation e.g. inequality in taxation, as some law abiding citizens or those with no opportunity to evade tax such as employees, bear a disproportional heavier tax burden than others. Alternative sources of Government revenue such as the running of Government budget deficits is inflationary and foreign loans/grants dependency causes heavy foreign debt burden (loan repayment with interest drains foreign reserves) and may be politically undesirable.

2.1.8 Taxpayer's Training

Taxpayers' training can be described as a method of training the taxpayers about the whole process of taxation and why they should pay tax (Olowookere & Fasina, 2013). It assists taxpayers in meeting their tax obligations to the government (*ibid*). Taxpayer training programme is one of the strategies of improving service delivery to the tax payers (Machogu & Amayi, 2013). Improving service delivery is very important in voluntary VAT compliance. Lack of voluntary VAT compliance compels Revenue Authorities to use costly and coercive methods for tax enforcement (Machogu & Amayi, 2013). Tax training to the business community is necessary when the key objective is to raise tax revenue in challenging and changing tax environment; particularly from the official tax assessment is considered. Due to the importance of taxpayer training, the TRA established the Department of Taxpayer Services and Education which is responsible for providing education and training to the business community. Thus, the taxpayer training is a very important tool designed to enable the taxpayer to know and

understand the tax laws, procedures and the overall tax system. It involves training of special units within the Revenue Departments, for providing education, counseling and support to the taxpayers, through different media which include newspapers, television, radio programmes, websites, seminars, and front desk help to disseminate key information to the taxpayers (Machogu & Amayi, 2013).

The basic goal of most training programmes is directed towards behavioural change. Being the case, behaviour analytical theories of change, and learning theories can best explain how training can change the behaviour of an individual (Machogu & Amayi, 2013). Change theory is used to predict the behavioural change when there is a problem caused by behaviour exists; there should be modifiable factors that cause the existence of the problem. Examples of these modifiable factors are attitudes, intention, knowledge, inter personal support, organizational and environmental conditions. The theory assumes that, the taxpayer training is fundamental in bringing about the change in the modifiable factors and it is expected to change the behaviour of the taxpayer and the way the taxpayer makes decisions. It has the significant positive impact on the behavioural change of an individual. The problem of RTC occurred during the initial stage of implementation of EFDs. The VAT registered traders were behaving in a way corresponding to manual method of collecting VAT despite of the new system introduced. Also there was a lack of knowledge concerning the new system of collecting VAT. Therefore in circumstances like this, the taxpayer training is a useful tool which can be used to change the behaviours of the taxpayers as well as giving the knowledge about the new system of collecting VAT using the EFD system.

Nyasha *et al.* (2012) argue that technological change has become the mode of operation in the 20th century business community. The technological change in tax system has increased the demand of new skills especially to the taxpayer. Tax payer training is one of the important and strong mechanism of upgrading the taxpayer's skills and knowledge to compliment the new technology. There is a strong positive relationship between advanced technology and the new skills (Gashi, Pugh & Adnett, 2008). For example, Abowd *et al.* (2007) found a strong positive empirical relationship between

advanced technology and skill in a cross-sectional analysis of US businesses in services, wholesale and retail trade sectors. EFD system is a new technology implemented to VAT registered traders and therefore the new skills are needed. It is an advanced technology compared to manual work which was used before by the VAT traders in which the traders were required to submit monthly sale tax returns using the paper work. This new system is designed in such a way that it records each transaction of the business and the amount to be remitted to the Government. Due to the change of technology and the way activities were done using paper work, the VAT registered traders should be trained to use EFD machines and how the activities should be done based on the new technology implemented by the Government. This will lead to efficient and effective use of EFD machines as a result the VAT income will also increase.

There is a positive relationship between taxpayer training and voluntary VAT compliance. Taxpayer training provides the necessary tax knowledge to comply with the tax matter and change the perceptions and attitudes towards tax-compliance by creating more positive attitudes. Many studies have confirmed this notion of positive relationship between the taxpayer training and voluntary VAT compliance (Machogu & Amayi, 2013). Therefore tax payer training improves individual's awareness and ethics toward reducing their tendencies of tax noncompliance.

Also the taxpayer training reduces the potential of tax evasion. Palil and Akir (2013) believed that with reasonable understanding of the tax laws, people are willing to respect the tax systems, consequently they are more compliant to pay tax instead of evading it. A study by Richardson (2006) in 45 countries in the world led to the conclusion, that tax payer training has negative relationship with tax evasion, where the tendency to evade tax is a result of low level of taxpayer training. This gives evidence that, tax payer training is a very essential tool of reducing tax evasion in a business community.

2.1.9 Electronic Taxation

The fact of relationship between the efficiency and effectiveness of the method of processing tax returns and the system of tax collection used by VAT registered traders in Tanzania is the one of the issues are not yet resolved. Allingham and Sandmo (1972) in Martin *et al.* (2010) introduced the portfolio approach to solve the individual tax cost problem and showed that, under weak tax processing systems, a number of costs are incurred.

The rise in the tax rate increases the amount of tax processing costs (Yitzhaki, 1994; Martin *et al.*, 2010). There are a number of problems faced by the VAT registered traders in processing their VAT returns using traditional/manual method. These problems include time taken in processing VAT returns; tax preparation costs; staff costs required to process returns and improve revenue capture through more accurate data entry; costs of stationery in form of receipt books, writing materials, files and filing of tax returns systems; costs that are incurred in processing tax refunds; costs of auditing sales records; insurance costs for the ETRs; space for keeping past data records; and prosecution and refund follow up time and costs (Mboma, 2012).

Despite dramatic improvements in recent years in information technology, including automated data capture, the administrative and taxpayer compliance burden associated with large-scale invoice matching continues to be significant (Martin *et al.*, 2010). The report of IMF of 2010 revealed that there are many related data entry errors in developing countries. Examples of such errors include taxpayer identification numbers, addresses and the names of the taxpayers which creates administrative costs with no associated revenue benefits.

Benefits of automation include a reduction of fraud, remote access to information, improved collection of statistics, and uniform application of tax legislation (Martin *et al.*, 2010). The introduction of automated system in tax collection will reduce the direct contact between the tax collection officer and trader, and thus reduce corruption. Other benefits include speedy generation, storage, retrieval and dissemination of information, which is almost impossible through manual means. Mugisha (2001) in the study by

Chatama (2013) attests that, the use of automation enhances timely access to accurate and relevant information, which is a prerequisite for good planning, programming, implementation as well as monitoring and evaluation which forms the key component in development.

2.1.10 Electronic Fiscal Devices in Tanzania

The Government of the United Republic of Tanzania decided to introduce EFDs to replace the Electronic Cash Register. The Electronic Cash Register operations did not meet the desired expectations, including tax collections, and administration of the system. The newly introduced EFD has been prepared to cater for the inefficiencies inherent in the former system of tax collection (<http://www.tra.go.tz/index.php/e-fiscal-devices-efd>)

A leaflet has been prepared to provide guidance and assistance to TRA and other stakeholders on the operationalization of EFDs and is to be used for business purposes with a view to ease administration and simplification of the system. However this leaflet does not substitute the law; and such it should be regarded as reference document only (*ibid*).

EFD is a machine designed for use in business for efficient control in areas of sales analysis and stock control system and should conform to the requirement specified under the VAT (EFDs) Regulation 2010 (Ikasu, 2014). These machines are used in conjunction with the accounting system to validate documents. The devices are designed in such a way that they record each transaction made by an organization to calculate the amount which is supposed to be remitted to the government as VAT (Nyasha *et al.*, 2012). The authors further argue that this method is more reliable, less costly, accurate and faster compared to the manual data processing method.

Types of Electronic Fiscal Devices

There are various types of EFDs in use depending on the nature and type of businesses. However the most commonly used EFDs are (<http://www.tra.go.tz/index.php/e-fiscal-devices-efd>);

i. Electronic Tax Register (ETR)

This device is appropriate and commonly used by retail outlets that issue receipts manually, alternatively known as Electronic Fiscal Cash Register (EFCR). This device may be used as standalone as it keeps totals in a fiscal memory and print retail receipts using an in built printer, Example of users of this device include small retailers of all types of businesses (Figure 2.1).

Figure 2.1: Electronic Tax Register (ETR)



Source: TRA, 2011

ii. Electronic Fiscal Printer (EFP)

This device is commonly used by computerized retail outlets. The device is connected in a computer network to store every sale transaction made in its fiscal memory as the user issues receipts to customers. It is basically similar to printers that are currently used in supermarkets, except for the fiscal memory (Figure 2.2). Example of users of this kind of device include Supermarkets, Petrol Stations and Ticketing offices.

Figure 2.2: Electronic Fiscal Printer (EFP)

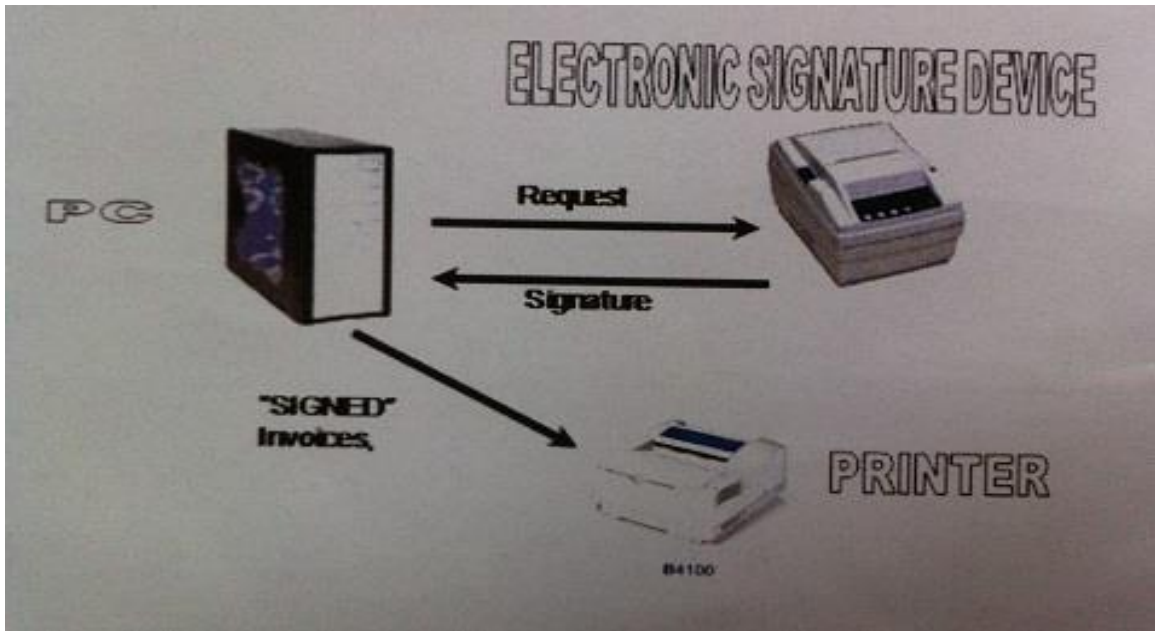


Source: TRA, 2011

iii. **Electronic Signature Device (ESD)**

This device is used by computerized businesses that issue receipts or invoices via special accounting software. The device is designed to authenticate by signing any personal computer producing financial document such as tax invoice. The device uses a special computer programme to generate unique number (Signature) which is printed on every invoice issued by the user's system. The number is unique such that no two numbers can be similar therefore making it easy to distinguish between authentic and fake invoices. In addition to this, the number is permanently stored in the memory for audit purpose against the copies of the invoices stored in the computer system. It is also an authority key for the user's computer functionality without which the PC cannot save or print any document. Example of the users of this device include Manufacturers, Whole sellers and the like (Figure 2.3).

Figure 2.3 Electronic Signature device (ESD)



Source: TRA, 2011.

Advantages of Using Electronic Fiscal Devices

EFDs have the following advantages over Electronic Cash Register (<http://www.tra.go.tz/index.php/e-fiscal-devices-efd/351-why-efds-is-preferred>);

- i. It has in-built Fiscal Memory which cannot be erased by mechanical, chemical or electromagnetic interferences;
- ii. Automatic self-enforcing Issuing of daily “Z” report after every 24 hours;
- iii. Transmits tax information to TRA system automatically;
- iv. It has irreversible date mechanism
- v. Issues fiscal receipts/invoice which is uniquely identifiable;
- vi. It can be used as a stand-alone and configured into a network;
- vii. It has at least 48 hours power backup, and it can use external battery in areas with no electricity supply;
- viii. It saves configured data and records on permanent fiscal memory automatically
- ix. It has tax memory capacity that stores data for at least 5 years or 1800 day transactions.
- x. Avoids conflict during audit and assessment of tax.

2.2 VAT Revenue Collection since 2010/11

Table 2.1 shows the VAT revenue collection for the TRA for a period of 4 consecutive years, since 2010 in which EFDs were firstly introduced. As can be observed in Table 2.1 the VAT contribution increases year after year, a collection which might have been attributed among other factors by EFDs. Other factors includes: improved tax awareness through taxpayer education campaign, economic growth, improved compliance and the like. It is difficult to single out contribution made by EFDs alone, however it is known worldwide that application of EFDs is accompanied by efficiency in service provision, accuracy in processing all of which promotes VAT compliance and hence an improvement in VAT collection.

Table 2.1: VAT Revenue Collection in Tanzania, 2010/11-2013/14

In millions of TZS

	2010/11	2011/12	2012/13	2013/14
Total VAT Revenue	827,742.6	981,963.62	1,168,766.71	1,335,138.94

Source: TRA Annual Reports

2.3 Empirical Literature Review

Mohammed and Gela (2014) studied the challenges of electronics tax register machine (ETRs) to businesses and its impact in improving tax revenue. It was found out that the use of ETRs improved timely filling of the monthly VAT returns. The major problems faced by the tax payers were unallowable expenses due to the problem of ETRs suppliers and the lack of consistency and transparency in imposing penalty for tax personnel. Maintenance cost and time, higher compliance costs were also found to be among the major problem of the tax payers.

Lubua (2014) 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 study observed the following factors to influence voluntary compliance: awareness of tax laws, business experience, the integrity of employees, low frequency of visitation by tax officers and training needs. The Revenue Authority must use relevant ICT tools to

positively promote these factors; as the result, the position of taxpayers to voluntarily file their tax returns will be enhanced.

Ikasu (2014) studied the challenges facing the implementation of using EFD in tax collection in Tanzania. The major findings of the study were; it had been indicated that EFD system had a lot of challenges which hinder the implementation of using the machine though the system enhanced tax collection in business premises in Tanzania. Those challenges include regular break down, fairness of tax estimated from tax payers, lack of education on the use of EFDs machines, maintenance of machines and underpricing of tax from traders.

Nkote and Luwugge (2010) studied the effect of automation and customs tax administration in the case of Uganda. The findings generally showed that automation predicted the cost of tax administration and effectiveness of revenue collection though predicted clearance time negatively. This means that the cost of tax administration was increased with increasing automation and the time taken to clear tax declarations was reduced with increased computerization of tax administration at Uganda Revenue Authority (URA). The implications were that URA achieved the computerization of customs tax administration at an increasing rate of costs due to incomplete automation of all the systems.

Naibei *et al.* (2012) conducted the study on the impact of use of ETRs on VAT compliance among private business firms in Kisumu city, Kenya. The study revealed that, effective and regular use of ETR had a significant impact on the VAT compliance ($R=0.622$, $p<0.05$), frequency of inspection of businesses by tax authorities had a slight impact on VAT compliance ($R=0.15$, $p<0.05$) while sales had insignificant negative relationship with VAT compliance ($R=-0.077$, $p>0.005$). Based on the research findings the study concluded that use of ETR had a significant impact on VAT compliance in Kenya.

Chatama (2013) examined how the use of ICT has modernized Tax administration procedures and improved revenue collection at Large Taxpayer Department of TRA. The study attests that, actual revenue collection increased from TZS. 204,397.5 Million in 2001/02 to TZS. 1,605,751.2 Million in 2008/09 while revenue contribution share rose to 41% in 2008/09 from 23% in 2001/02. Although other factors in the economy like; increased internal trade, reduced importation and more reliance to home products may cause the increase, if there is no good tax administration, revenue will not be reflected in collections. The fact that revenue has increased proves that, ICT use enhances better tax administration.

The study of Mboma (2012) reveals that, the main challenges facing adoption of EFDs in Tanzania among others include availability of GSM network in most parts of the country. Another problem lies on the users of EFDs which is the issue of not sending Z Reports on daily basis. Design of Fiscal devices which use fiscal memory requires the Z-Report which is the actual data stored in fiscal memory of fiscal device. High accumulation of fiscal memory results in malfunctioning of the device; because it will require users to clear out fiscal memory by sending data to TRA. Also TRA has to have more emphasis on more marketing and more awareness campaign to several businesses on importance of EFDs for the development of the nation. Also the researcher concluded on the effectiveness of EFDs in processing VAT returns; EFDs reduce the tax-reporting burden on businesses while improving the efficiency and effectiveness of government operation, provides timely and accurate tax information to TRA, increases the availability of electronic tax filing, and models simplified state tax employment laws.

Weru *et al.* (2013) 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. It was found that, ETR system had enhanced tax collection in business premises in Nairobi and that the system had to a great extent assisted in sealing loopholes of tax evasion in Nairobi. It was further found out that the stakeholders were yet to be trained effectively on the use of ETR machines. The system had also assisted in improvement on tax compliance. It was however established that the system is yet to be fully institutionalized in the Kenya

Revenue Authority (KRA) system. The study established that the Authority is still experiencing some resistance to change from both internal and external customers.

Martin *et al.* (2010) study aimed to assess the effectiveness of ETRs in the processing of VAT returns. The study sought to determine the extent to which the ETRs are being used by the taxpayers, the problems if any that they were encountering in using them as well as get possible solutions to the problems. The study concluded the following; first, Kenya has witnessed significant changes in many aspects of its economy over the last four decades, but like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries. Secondly, the timely filling of the monthly VAT returns is attributed to many factors. ETR is one of the factors. Further the introduction of ETR has assisted in cutting costs that the business used to incur in processing VAT. Thirdly, it was found that ETRs have enhanced the revenue collection resulting from sound sales and stock audits. Fourthly, to evaluate the effectiveness of ETRs in filling VAT Returns at regular intervals, it was found that the use of ETRs was not a waste of funds and has assisted the business in many ways. They also noted that ETRs do not break down too often. Lastly, KRA has articulated a vision for Kenyan customs, and in the process of delivering such mandate, it has faced challenges while meeting its pillars that the following challenges need to be addressed within the KRA: the cost and classification of the businesses which need to use ETRs.: ETRs are expensive, cost to be paid in instalments; ETRs should be compatible with computers in business premises.

Nyasha *et al.* (2012) conducted a research which sought to find the attitude of motor industry employees in Zimbabwe towards the use of fiscalised electronic devices. It was found that fiscalised electronic devices had positively impacted on the motor industry through improvements in tax collection, saves time in tax collection, reduces direct contact between tax collectors and hence minimizes corruption. However, the research also found that employees with low educational level find it difficult to use fiscalised electronic devices because they lack know how on how best to use them. Employees also negatively perceived the use of fiscalised electronic devices because they are not

aware of the method and some are just resistant to change that is given all the resources they will reject to use the advanced method.

Taye's study (2011) aimed to assess the effectiveness of ETRs in the processing of VAT income in Addis Ababa City, Ethiopia. The study sought to determine the ETR effect on administration cost and compliance cost, the extent of tax evasion while using ETRs and audit follow up effects. Also the study sought to establish if the ETRs had increased the speed at which taxpayers processed their VAT returns and if there were any associated costs in the processing of VAT. The findings of this research are ETRs have a positive effect on VAT returns and others independent variables such as awareness of ultimate tax payers and VAT registered, tax audit and follow up, tax evasion, and administration cost has a significant effect on VAT income except compliance cost.

To the best of the knowledge of the researcher there is no substantial prior study done in Tanzania relating to the EFDs and VAT. Based in this fact, the researcher faced difficulties in obtaining scholarly literatures in Tanzania context. Studies by Chatama (2013) and Lubua (2014) that have been reviewed above each focused on ICT system in taxation. These researchers did not focus their attention on the EFDs which is very important aspect in tax collection. The literatures on EFDs development has often addressed the question of VAT compliance (Naibei *et al.*, 2012), attitudes of employees towards the use of EFDs (Nyasha *et al.*, 2012), effectiveness of EFDs in processing VAT return (Martin *et al.*, 2010; Taye, 2011) and challenges of EFDs to businesses (Mboma, 2012; Mohammed & Gela, 2014). In response to the above empirical evidences, this study aims to address the influence of EFDs on VAT collection.

2.4 Conceptual Framework

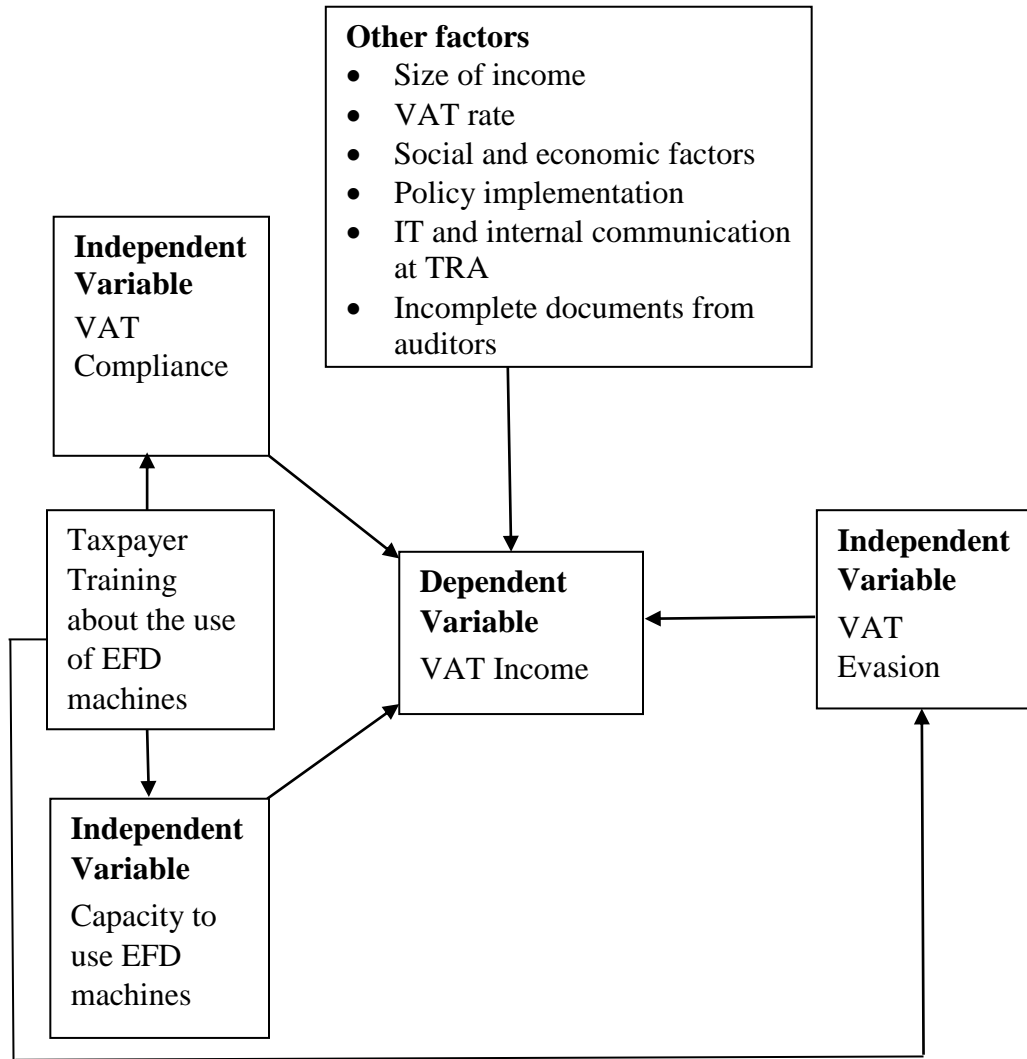
Figure 2.1 shows how the researcher conceptualized the problem based on the title and specific objectives of the study. The literature on VAT income points out that, the level of VAT compliance, size of income of the taxpayers, the amount of VAT charged by tax authority, and the possibilities of the taxpayers in evading paying VAT are some of the determinants of VAT income (Kagina, 2012). This suggests that, VAT income can therefore be increased if control measures of the determinants are put in place.

Electronic VAT register also depends upon social and economic factors, IT and internal communication at TRA in tax management, policy formulation and incomplete documentation from auditors (Pandu, 2012). Therefore, the researcher adapted two determinants which are VAT compliance and VAT evasion because they conform to the specific objectives of this study.

Based on the literature review, it has been hypothesized that the taxpayers training about the use of EFD machines has the impact on the capacity of using the EFD machines, VAT compliance and VAT evasion and thus it affects VAT income. Therefore the hypothesis propound that there is a strong positive relationship between the capacity of using the EFD machines and the VAT income. The capacity about the use of EFD machines is measured on how the VAT registered traders know how to do the important things in the machines.

Therefore, the independent variables of the study are VAT compliance, VAT evasion and capacity to use of EFD machines which result in the emergence of dependent variable which is VAT income. The dependent variable VAT income is positively affected by VAT compliance. This means that, if the level of VAT compliance increases then the VAT income will also increase. The dependent variable is negatively affected by VAT evasion. This means that, when there is way or no way to evade paying VAT while using EFD machine the VAT income also decrease or increase respectively (Taye, 2011). Lastly, the VAT income is positively affected by capacity of using the EFD machines. If the EFD machines are effectively and efficiently used by VAT registered traders, then the VAT income will also increase. Therefore, three independent variables are considered to have independent influence on VAT income and thus they are indicators of VAT income.

Figure 2.4: Conceptual Framework



Source: Modified from Kagina (2012).

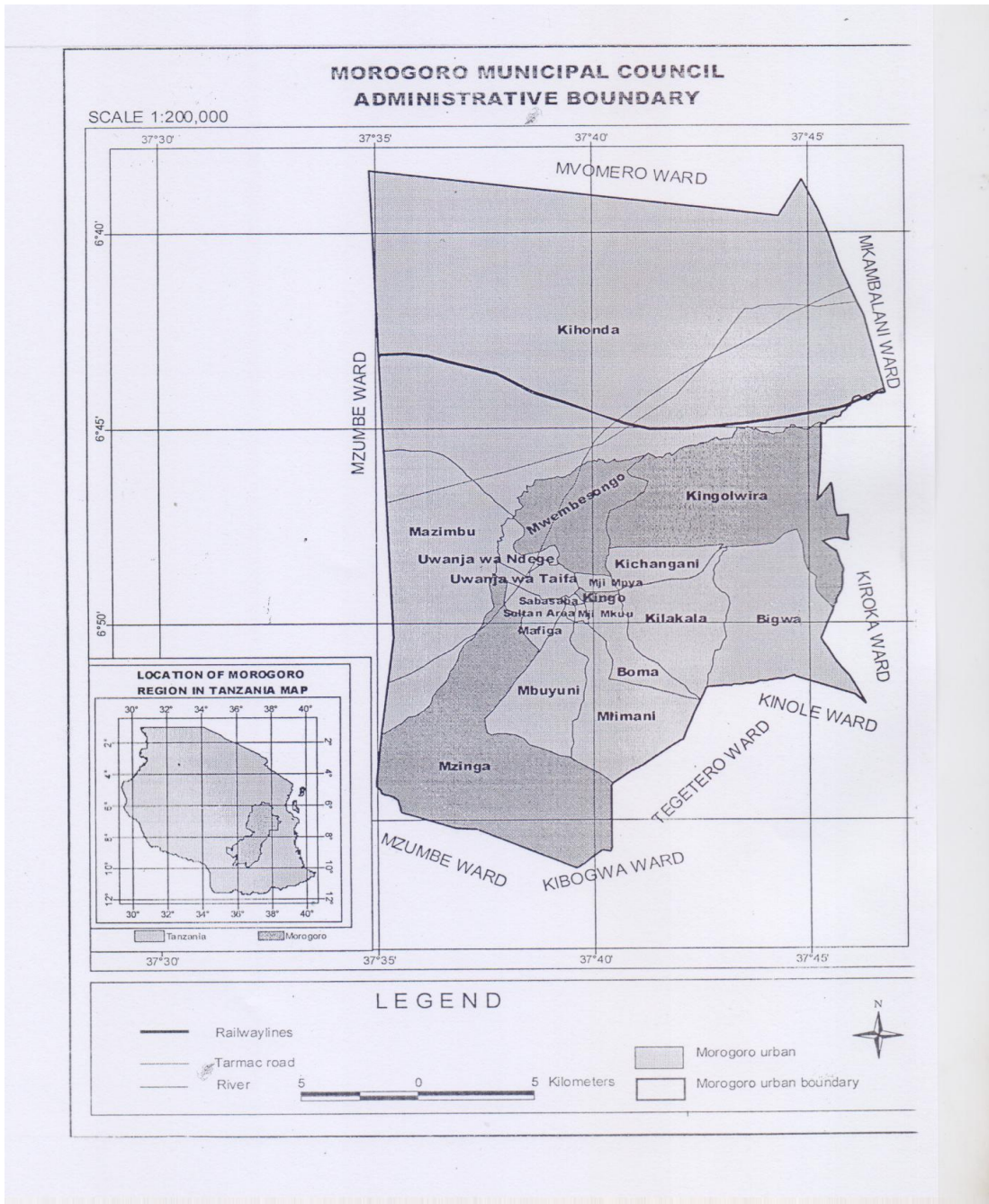
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Description of the Study Area

The study was conducted in Morogoro Region, specifically at Morogoro Municipality in Tanzania. Morogoro Municipality is about 195 kilometres to the West of Dar es Salaam and is situated on the lower slopes of Uluguru Mountains whose peak is about 2,630 meters (8,629 feet) above sea level. Morogoro Municipality lies between latitude 4.49 south of Equator and longitude 37.0 east of Greenwich. It covers an area of 531 square kilometres and it is boarded by seven wards. This study was done in Morogoro Urban as indicated in Figure 3.1. Morogoro Municipality is a fast growing business place due to the fact that it enjoys one peculiar advantage of being a hub whereby; there is a highway road link to East, West, South and Northern parts of the country as well as it is nearest to biggest city of Dar es Salaam. Furthermore, this is among the regions in Tanzania where EFD machines received highly resistance. The area is selected for this study because it has many cases related to RTC and also there are many businesses of different categories which led to the collection of more reliable and relevant data for the study. Furthermore, the area selected is convenient to the researcher due to the possibility of acquiring data easily.

Figure 3.1: A Map of Morogoro Municipality



Source: Morogoro Municipal Council 2015.

3.2 Research Design

This study adopted a case study research design. Saunders, Lewis, and Thornhill (2009) define case study as a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence in the area chosen for the study. The researcher adopted this research design because this approach allowed the researchers to concentrate on a real scenario, thus proffering solutions to any business that may want to use the stated findings for improving a real situation (Nyasha *et al.*, 2012). Also the case study allows the researchers to give their own judgments and opinions since they were actually interacting with the participants under study (*ibid*). Furthermore, this approach enabled the researcher to gather adequate and quality data that provided a great amount of description, detailed information about a particular case and comprehensive understanding of the context of the research and the processes being enacted.

3.3 Target Population and Sample Size

3.3.1 Target Population

Saunders *et al.* (2009) defined population as the full set of cases from which a sample is taken. The target population was the VAT registered traders in Morogoro Municipality who are using EFD machines. The study target population comprised of a total of 387 VAT registered traders drawn from the Morogoro Municipality registered as firms active as January 25, 2015. The target population of the VAT registered trader is suitable due to the fact that the EFD project was first implemented to them and therefore most of the VAT registered traders have been registered with the machine for at least three years.

3.3.2 Sample Size

Best and Kahn (2006) stated that a sample equal or above 10% is valid to generalize results for the whole population. Ten percent (10%) of the target population was used as a sample size of this study. This group of VAT registered traders is regarded to be small; therefore the researcher opted to a use sample size of 10% so as to get enough number of VAT registered traders to represent the whole population. The target population comprised of a total of 387 VAT registered traders and 109 TRA officers who were the

key informants of this study. Therefore, thirty nine (39) VAT registered traders in Morogoro Municipality were used as a sample size and eleven (11) TRA officers from the TRA Morogoro regional headquarter were used as key informants of the study.

3.4 Sampling Technique

The simple random sampling technique was used to select the sample of the study. According to Saunders *et al.* (2009) simple random sampling is the purest form of probability sampling. This technique assures that each element in the population has an equal chance of being included in the sample size. Simple random sampling allows the researchers to select the sample size without any bias. The sample selected can therefore be said to be representative of the whole population (*ibid*). The choice of this technique was due to the fact that, each target population has the same characteristics. The VAT registered traders use the same type of EFD machines and TRA officers performs almost the same duties on VAT collection.

3.5 Research Approach

The research study used both quantitative and qualitative approaches. Quantitative approach was applicable since it involves the generation of data in quantitative form which can be subjected to rigorous quantitative analysis in a formal and rigid fashion (Kothari, 2008). Also it involves dealing with statistical data which was verified on the ground and computed in numbers and percentages. Where some responses did not require statistical analysis, qualitative research method was used to give opinions and more details about the respondents. The qualitative approach was applicable during the interview with TRA officers in which the personal assessment about EFD machines was given. Qualitative approach is concerned with subjective assessment of attitudes, opinions and behaviour. Research in this situation is a function of researcher's insight and impression (*ibid*).

3.6 Unit of Inquiry and Information obtained

Unit of inquiry refers to individuals who are potential sources of information for the study i.e. people visited by study to collect information required to answer research questions (Emmanuel, 2009). The unit of inquiry of this study was the TRA employees in EFD section and the VAT registered traders from the different sectors of the economy. The researcher collected information from the employees in EFD section because these are the ones who directly deal with the day to day activities of the EFD machines. The information obtained from the employees and the head of EFD section is the number of VAT registered traders who are using EFD machines from the financial year 2009/2010 to 2013/2014, the contribution of VAT revenue in total tax revenue, the opinions about EFD machines and the analysis of VAT compliance from the financial year 2009/2010 to 2013/2014 based on the accuracy of VAT liability in each financial year. On the other hand, the researcher collected information from the VAT registered traders because they are responsible for enhancing voluntary VAT compliance in order to do away all incentives of VAT evasion and are the ones who are using the EFD machines. The information obtained from the VAT registered traders were their feelings and perceptions on the specific objectives earmarked on this study.

3.7 Data Collection Methods

3.7.1 Primary data

Kothari (2008) defined primary data as those data that are collected afresh and for the first time and thus happen to be original in character. The primary data was collected using the questionnaires and interview guides checklists. Questionnaires were used to collect primary data directly from the VAT registered traders in Morogoro Municipality while interview guides (checklists) were used to collect data from TRA officers in Morogoro regional headquarter.

3.7.1.1 Administration of the Questionnaire

The questionnaires were administered to VAT registered traders in Morogoro Municipality by the researcher himself. The questionnaire presented as Appendix 1, was divided into four sections; the first section covered the respondent preliminary information and the other three sections were structured according to the objectives of this study. The questionnaire contained both open ended and closed questions which assisted the researcher to get statistical data and opinions of the respondents.

The researcher asked respondents the questions and filled the questionnaire by himself. This was done after seeking the consent of the respondent. The issue of EFD system and VAT evasion are complicated by the sensitive nature of topic. The threat of penalties, prosecution and stigmatization can induce individuals either to lie or to refuse to take part in the study because they wish to avoid answering sensitive questions (Houston & Tran, 2001; Faridy, 2013). When the issue is sensitive, the appearance of the researcher to the respondents is more likely to increase the likelihood of honest responses. This is because, it will make the respondents feel that their contribution is valued and appreciated and thus it will bring better response rate. In addition to that, indirectly phrased questions were asked in order to capture important information from the respondent. Therefore, this is the main reason which made the researcher to use self-administered questionnaire as well as asking indirectly phrased questions in the questionnaire.

3.7.1.2 Interviews with key informants

A checklist interview guide was prepared to solicit information from key informants. Mettrick (1993) defined a key informant as a member of the clientele who is found to be most informed about the situation being studied, knowledgeable, accessible and willing to talk about the issue under study. For the purpose of this study, key informants were the TRA officers who are the main implementers of EFDs. TRA officers were interviewed using the checklist presented as Appendix 2.

3.7.2 Secondary data

These are data which were already collected and analyzed. According to Kothari (2004), these are data which have been collected by someone else and which have been passed through the statistical process. Secondary data obtained in the study was the analysis of VAT compliance using the TRA office data.

3.7.2.1 Documentary Review

Documents are essential in getting details about EFD system in Morogoro Municipality. Various documents were reviewed in TRA offices. The documents reviewed include: record on the trend performance of VAT in Morogoro Municipality, archival records, TRA reports and evaluation reports among others.

3.8 Measuring VAT Compliance

Studies have shown that, individuals tend to answer untruthfully when asked questions about sensitive issues such as their own tax payment (Ali, Fjeldstad & Sjursen, 2013). VAT compliance is among sensitive issues which have been over reported in many studies (*ibid*). While some authors argue that obtaining reliable quantitative information about VAT compliance behaviour is practically impossible, Reinikka and Svensson (2006) maintain that application of appropriate survey methods and interview techniques comes a long way in solving the problem. Based on the study of Reinikka and Svensson (2006), the researcher used indirectly phrased question to capture VAT compliance attitude of the respondent. In the questionnaire, respondents were asked to state their opinion about other people who do not pay VAT that they owe on their income. They were asked to state whether it is “not wrong at all”, “wrong but understandable” or “wrong and punishable”. Based on these responses, individuals are considered as having a VAT compliant attitude if their response is “wrong and punishable” and non-compliant attitude if their response is either “not wrong at all” or “wrong but understandable”. The researcher opted to use this technique because it can capture the compliant attitude of the respondent at any situation.

Torgler (2011) recognize that there are some good reasons to use a multi-item questions instead of a single question to measure VAT compliance. He further argued that, VAT compliance is likely to be a multi-dimensional concept, which may require a multi-item measurement tool, as in psychometric studies. Due to this fact, the researcher adopted another approach which was used by the Inland Revenue Services in United States of America (USA) in assessing the level of tax compliance (Machogu & Amayi, 2013). This was done by analyzing the total taxes collected into two components, namely, that from the audit and enforcement activities, and that which was paid voluntarily. The researcher adopted this approach because it is much used when a new thing is introduced in a tax system. In case of this study, the new system of collecting VAT was introduced in 2010 therefore this approach is able to show the trend of change of VAT compliance from the year of implementation to the current year.

3.9 Data Analysis

According to Gay (1992) in Weru *et al.* (2013), the most common method of reporting a descriptive research is by developing frequency distributions, calculating percentages and tabulating them appropriately. Data collected through various methods were synchronized and organized according to the research objectives/questions. They were then presented in tabular form, with frequency and percentages being calculated for drawing up conclusion on particular observation. Non quantifiable data were analyzed based on the content analysis and interpretation, and for open ended questions, counting was done manually to determine frequency of each response and percentages were computed.

3.10 Validity and Reliability of the Research Instruments

3.10.1 Validity

According to Msabila and Nalaila (2013), one of the most important aspects that should be addressed in research is the issue of validity of research instrument. They further argued that, once the research instruments are not valid it means that the data that will be collected will also be wrong and the findings as well as conclusions will be wrong too. Validity refers to the ability of a scale or tool to measure what is supposed to measure

(*ibid*). In order to establish validity, a pilot study was done before the main data collection. The piloting was carried out with the VAT registered traders in Morogoro Municipality and the TRA officers. The researcher administered the questionnaire to five VAT traders and the five TRA officers who were picked using a simple random sampling technique. Thereafter, some questions were modified and other themes were added before they are taken to the field.

3.10.2 Reliability

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings (Saunders *et al.*, 2009). The reliability has to do with the quality of measurement (this means that, reliability is the consistence or repeatability of your measure). After the pilot study, Cronbach's Alpha was used to determine internal reliability. The degree of internal reliability was obtained by using SPSS computer programme. The value of Cronbach's Alpha was 0.863. Due to the fact that the value was above 0.7 and below 1, then the instruments have high internal reliability.

3.11 Ethical Considerations

In consideration of the importance of being ethical, the researcher adhered to the following:

- i. The researcher secured the research clearance from Mzumbe University, whereby researcher's introduction letter, which explains the purpose of the research study, was granted before the visit.
- ii. Researcher requested for research permit from TRA before starting collecting data.
- iii. In business premises, researcher requested permission from the head of business before conducting the study.
- iv. The informant consent is paramount and was informed of the purpose of the study before data collection process.

- v. The real name of the informant and business premises were not included in the report, this was for ensuring confidentiality (anonymity was also applied in report writing).
- vi. Voluntary participation-the researcher ensure that participants were not forced into participating in research. If a participant withdrew, a replacement was randomly sought from the VAT registered traders.
- vii. Arrangement was made with respondents through physical visits before data collection process. On this prior arrangement, the researcher and the respondents agreed on the days and time for the data collection process.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Demographic Characteristics of Study Respondents

4.1.1 Personal characteristics of the VAT registered traders

Out of 45 VAT registered traders in which the questionnaire was administered, only 39 responded. This makes the response rate to be 86.7%. Business related information requested included, among the others, main business activity, the gender of the owner of the business, the legal form of the business, the year the business was first registered for VAT and the year the firm started to use EFD machines.

As observed in Table 4.1, there are three categories of business activities of the registered VAT traders; 13(33.3%) being service providers, 21 (53.9%) merchandising and 5 (12.8%) manufacturing. Among those businesses, 27 (69.2%) are owned by males and 12 (30.8%) owned by females. Regarding the legal form of the businesses, 24 (61.5%) were sole proprietorship, 11 (28.2%) companies and 4 (10.3%) joint venture. This is an indication that, all VAT registered traders in Morogoro Municipality were well presented in this study by looking at their proportionate numbers of participation.

Table 4.1 further displays the year in which the business started to collect VAT. It was found out that most businesses have been in operation for more than five years, that is 19 (48.7%) of the businesses have been in operation for over 7 years, while 9 (23.1%) of them have been in operation for between 4 and 6 years and 11 (28.2%) of the businesses have been in operation between 1 and 3 years ago. These findings show that most of the businesses have been in operation for more than five years, indicating that the information provided for this study was obtained from more experienced businesses which are able to evaluate an old tax system, before changing to a new automated tax regime.

Table 4.1: Personal characteristics of VAT registered traders.

Variable	Frequency	Percent
Activity of the business		
Service giving	13	33.3
Merchandising	21	53.9
Manufacturing	5	12.8
Total	39	100
Sex of the owner		
Male	27	69.2
Female	12	30.8
Total	39	100
Legal form of the business		
Sole proprietorship	24	61.5
Company	11	28.2
Joint venture	4	10.3
Total	39	100
Year registered to collect VAT		
Year 2008& below	19	48.7
Year 2009-2011	9	23.1
Year 2012-2014	11	28.2
Total	39	100
Year started to use EFD machines		
Year 2010	21	53.8
Year 2011	7	17.9
Year 2012	5	12.8
Year 2013	5	12.8
Year 2014	1	2.7
Total	39	100

Source: Field Data, April (2015).

The respondents were asked to indicate the year in which they have started to use EFD machines. As observed in Table 4.1, 21 (53.8%) of the respondents indicate that they acquired and were using EFD machines for five years. This means that, they started using the EFDs since the system was introduced by TRA to collect VAT in Tanzania. Seven (17.9%) of the respondents indicated that they acquired the machines four years ago and the remaining 11 (28.3%) respondents indicated that they acquired the machines between 1 and 3 year ago. This is an indication that the information presented in this study was given by businesses with experience in using EFD machines.

4.1.2 Personal characteristics of the TRA officers

Eight (72.7%) out of 11 TRA officers were male and 3 (27.3%) were female as shown in Table 4.2. All the TRA officers were from the TRA Morogoro regional headquarters and they all work in the EFD section. This means that, all the TRA officers interviewed have high knowledge and skills concerning EFD machines in Tanzania. Out of 11 TRA officers, 2 (18.2%) were below 30 years old, 5 (45.5%) were 31-40 years old and 4 (36.4%) were above 41 years old. This is an indication that, the opinions of all gender and aged groups have been presented in this study.

Table 4.2 also shows that 1 (9.1%) of the officers had diploma, 8 (72.7%) had first degree and 2 (18.2%) had master's degree level. Table 4.2 further shows that 3 (27.3%) of the officers had working experience of less than 5 years, 6 (54.5%) had working experience of 5-10 years and 2 (18.2%) had more than 10 years of working experience. TRA officers are the key informants of this study. Therefore this indicates that, the ideas of well-educated and experienced key informants have been presented in this study.

Table 4.2: Personal characteristics of the TRA officers

Variable	Frequency	Percent
Sex of respondent		
Male	8	72.7
Female	3	27.3
Total	11	100
Age of respondent		
Below 30 years	2	18.2
31-40 years	5	45.5
Above 41 years	4	36.4
Total	11	100
Education Level of respondent		
Diploma	1	9.1
First degree	8	72.7
Master's degree	2	18.2
Total	11	100
Working experience		
Less than 5 years	3	27.3
5-10 years	6	54.5
More than 10 years	2	18.2
Total	11	100

Source: Field Data, April (2015).

4.2 The status of EFD system on improving VAT compliance

Tanzania started to struggle to enhance tax compliance among the tax payers even before the introduction of VAT. In order to improve VAT collection, the TRA ought to develop an environment that raises the awareness and willingness of VAT registered traders towards paying VAT voluntarily. Introduction of EFD machines is among the efforts done by TRA to improve VAT compliance. Therefore, this section attempted to examine the role or contribution of EFD machines on improving VAT compliance and assess the VAT compliant attitude among the VAT registered traders.

4.2.1 Effectiveness of EFD machines on improving VAT compliance

Table 4.3: Effectiveness of EFD machines on improving VAT compliance n=39

	Frequency	Percent
Yes	29	74.4
No	10	25.6
Total	39	100

Source: Field Data, April (2015).

Respondents were asked about the effectiveness of EFD machines on improving VAT compliance. Table 4.3 indicates that majority 29 (74.4%) of the respondents were of the opinion that use of EFD machines is an effective way of improving VAT compliance among the VAT registered traders. Only 10 (25.6%) of the respondents said use of the machines is not an effective way of improving VAT compliance. In order to strengthen the finding given in Table 4.3, the researcher interviewed 11 key informants to get their opinions about the effectiveness of EFD machines on improving VAT compliance. All 11 (100%) key informants interviewed argued that, EFD machines are an effective way of improving VAT compliance.

4.2.2 Level of VAT compliant attitude

Table 4.4: Response on the level of VAT compliance attitude n=36

	Frequency	Percent
Not wrong at all	5	13.9
Wrong and understandable	8	22.2
Wrong and punishable	23	63.9
Total	36	100

Source: Field Data, April (2015).

In the questionnaires, respondents were asked to state whether they think the action of other people who do not pay VAT on their income is “not wrong at all”, “wrong but understandable” or “wrong and punishable”. Out of 39 respondents, only 36 respondents answered this question which made a response rate to be 92.3%. As observed in Table 4.4, 23 (63.9%) of the respondents said that it is wrong and punishable, 8 (22.2%) of the

respondents indicated that it is wrong and understandable and the remaining 5 (13.9%) of the respondents said it is not wrong at all. This means that, 23 (63.9%) have a VAT compliant attitude while 13 (36.1%) do not have a VAT compliant attitude. Overall the majority of VAT registered traders have a VAT compliant attitude.

4.2.3 Level of VAT compliance among VAT registered traders

Table 4.5: Analysis of VAT compliance

n=39

YEAR	I declared an accurate VAT liability on a particular financial year.	VAT liability contained error and therefore additional VAT was assessed through auditing.	Total
	F (%)	F (%)	F (%)
2009/10	27 (69.2)	12 (30.8)	39(100)
2010/11	23 (59.0)	16 (41.0)	39(100)
2011/12	26 (66.7)	13 (33.3)	39(100)
2012/13	28 (71.8)	11 (28.2)	39(100)
2013/14	29 (74.4)	10 (25.6)	39(100)

Source: Field Data, April (2015).

In the questionnaire, respondents were required to indicate whether they declared an accurate VAT liability on a particular financial year or their VAT liability contained error and therefore additional VAT was assessed through auditing. The information needed was for the last five years starting from financial year 2009/2010 to 2013/2014. A breakdown of responses is listed in Table 4.5. Overall most traders declared accurate VAT liability compared to those who paid additional VAT after auditing. The above findings have been amplified by evidence supported by secondary data obtained at the TRA Morogoro regional office.

Table 4.6: Analysis of VAT compliance using the TRA office data

YEAR	VAT traders who declared an accurate VAT liability on a particular financial year.	VAT traders in whose VAT liability contained error and therefore additional VAT was assessed through auditing.	Total
	F (%)	F (%)	F (%)
2009/10	112 (56.6)	86 (43.4)	198(100)
2010/11	113 (50.7)	110 (49.3)	223(100)
2011/12	149 (55.2)	121 (44.8)	270(100)
2012/13	174 (55.9)	137 (44.1)	311(100)
2013/14	229 (59.2)	158 (40.8)	387(100)

Source: TRA Annual Reports, April (2015).

Table 4.6 shows the number of VAT registered traders in Morogoro region who declared an accurate VAT liability and those whose VAT liability contained errors and therefore the additional VAT was assessed through auditing. The information needed was from the financial year 2009/10 to 2013/14. The data shows that the VAT registered traders who declared an accurate VAT liability were 112 (56.6) in 2009/10, 113 (50.7) in 2010/11, 149 (55.2) in 2011/12, 174 (55.9) in 2012/13 and 229 (59.2) in 2013/14. When comparing with the findings obtained in Table 4.5, majority of VAT registered traders declared an accurate VAT liability in each financial year. This provides further supplementary evidence to the question raised in Table 4.5 that majority of respondents declared an accurate VAT liability in each fiscal year.

4.3 Quality of EFD system in sealing the loopholes for VAT evasion

VAT evasion is one of the greatest problems facing Tanzania tax system as well as the most African countries. Dealing with the problem of VAT evasion requires at least some understanding of the factors underlying the individual taxpayer's decision whether to pay or evade taxes. Consequences of VAT evasion are its effects upon indicators of economic activities. If VAT evasion becomes widespread then affects efficiency and effectiveness of management of VAT.

One of the basic goal of introducing EFD machines in Tanzania tax system was that, EFDs is a self-policing which cuts down VAT evasion. The EFD machines records all the transactions done by the VAT traders therefore it is difficult to evade paying VAT. Therefore, this section intends to determine if EFD system has sealed loopholes for VAT evasion among the VAT registered traders.

4.3.1 Effectiveness of EFD system in sealing the loopholes for VAT evasion

Table 4.7: Response on the effectiveness of EFD system in sealing the loopholes n=39

	Frequency	Percent
Very effective	7	18
Effective	10	25.6
Not effective	22	56.4
Total	39	100

Source: Field Data, April (2015).

In the questionnaire, respondents were asked about the effectiveness of EFD system in sealing the loopholes for VAT evasion. Table 4.7 shows that, 7 respondents representing 17.9% of the total respondents said EFD system is very effective, 10 representing 25.6% of the total respondents said it is effective and 22 representing 56.4% of the total respondents said the system is not effective. The same question was given to the key informants in order to solicit their views about the effectiveness of EFD machines in sealing the loopholes of VAT evasion.

Table 4.8: Effectiveness of EFD system in sealing the loopholes (TRA officials) n=11

	Frequency	Percent
Very effective	2	18.2
Effective	3	27.3
Not effective	6	54.5
Total	11	100

Source: Field Data, April (2015).

As observed in Table 4.8, 2 key informants representing 18.2% of the total respondents said EFD system is very effective, 3 representing 27.3% of the total respondents said it is effective and 6 representing 54.5% of the key informants said the system is not effective. When comparing with the findings obtained in Table 4.7, majority of the respondents and the key informants said that the EFD system is ineffective way of the sealing loopholes for VAT evasion.

4.3.2 Awareness of the loopholes for VAT evasion

Table 4.9: Response of VAT traders towards awareness of VAT evasion n=25

	Frequency	Percent
Fully aware	5	20.0
Slight aware	12	48.0
Not aware	8	32.0
Total	25	100

Source: Field Data, April (2015).

In the questionnaires, respondents were asked if they are aware of the loopholes for VAT evasion. Only 25 (64.1%) out of the 39 total respondents answered this question. Out of 25 respondents, 5 (20.0%) attested that they were fully aware of the loopholes for VAT evasion, 12 (48.0%) were slight aware and 8 (32.0%) were not aware. A breakdown of responses is listed in Table 4.9.

4.3.3 Reasons that caused VAT registered traders to evade paying VAT

Table 4.10: Reasons that caused VAT registered traders to evade paying VAT n=39

Reasons for evading paying VAT	Frequency	Percent
VAT rate is too high	17	43.6
There are so many taxes	13	33.3
Poverty	4	10.3
Poor public service	3	7.7
Unfair tax system	1	2.6
The government waste/steal taxes	1	2.6
Total	39	100

Source: Field Data, April (2015).

In the questionnaire, respondents were asked what they think was the main reason that some people evade taxes. As can be seen in Table 4.10, 17 respondents representing 43.6% of the respondents indicated that VAT rate was too high, 13 respondents representing 33.3% of the respondents were of the opinion that there are so many taxes, 4 (10.3%) indicated poverty as reason for evading VAT and 3 (7.7%) because of poor public services as the reason for evading VAT. Other reasons mentioned are unfair tax system and the government waste/steal taxes which were indicated by 1 (2.6%) respondent each.

4.4 Capacity of the traders on the use of EFD machines

The tax administration that wants to improve the capacity of the taxpayers on the use of EFD machines must do all it can to provide an adequate and effective training about the use of EFD machines. It is presumed that when taxpayers training about the use of EFD machines is provided to the taxpayers, it will enable taxpayers to know how to do the important things in EFD machines and it will facilitate the business transactions. When this happens efficiency and effectiveness will be improved or achieved and thus the VAT income will also increase. Therefore, this section intends to find out if the VAT registered traders were effectively trained on the use of EFD machines.

4.4.1 Training about the use of EFD machines

Table 4.11: Training and capacity of using EFD machines **n=39**

	Frequency	Percent
Adequate training about the use of EFD machines		
Yes	28	71.8
No	11	28.2
Total	39	100
Capacity of using EFD machines		
Yes	31	79.5
No	8	20.5
Total	39	100

Source: Field Data, April (2015).

In the questionnaires administered, all the respondents declared that they have been given training about the use of EFD machines. Furthermore, respondents were asked if they have been given adequate training about the use of EFD machines. As observed in Table 4.11, 28 (71.8%) of the respondents agreed that they have been given adequate training while 11 (28.2%) of the total respondents disagree and said that the training given was not adequate. In addition, Table 4.11 further illustrates the capacity of the taxpayers on the use of EFD machine. As shown in Table 4.11, 31 (79.5%) were of the opinion that the training given has increased the capacity of using EFD machines while 8 (20.5%) said the training did not increase their capacity on the use of EFD machines.

4.4.2 Sources of knowledge about the use of EFD machines

Table 4.12: Sources of knowledge about the use of EFD machines **n=39**

	Frequency	Percent of Cases
Supplier	31	79.5
Seminars	26	66.7
Television	7	17.9
Radio	3	7.7
Pamphlet	7	17.9
Newspaper	2	51.1
Tax consultancy	1	2.6
Other traders	1	2.6
Total	78	200

Source: Field Data, April (2015).

*Exceed 100% because it is a multiple response question.

In the questionnaires administered, the respondents were given a multiple response question in which they were required to indicate where they got knowledge about the use of EFD machines. The options given were supplier, television, radio, pamphlets, newspaper and seminars. In addition to that, the respondents were given the other option to indicate any other sources which were not mentioned in the questionnaire. The response rate is indicated in Table 4.12.

4.4.3 The role played by each media on providing EFD training

Table 4.13: The mean score of each media **n=39**

	Frequency (N)	Mean Score
Supplier	38	4.2632
Seminars	32	4.1250
Television	27	1.5926
Radio	22	1.4091
Pamphlet	23	1.9130
Newspaper	22	1.6818
Tax consultancy	1	4.0000
Other traders	1	4.0000

Source: Field Data, April (2015).

In the questionnaires, the respondents were asked to score the contribution of each media in providing training about the use of EFD machines. The score was from 1 to 5 in which 1 was for a very low role and 5 was for a very big role. Table 4.13 shows the mean score of each media based on the scale given in the questionnaire.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 The status of EFD system on improving VAT compliance

From Table 4.3, the majority of VAT registered traders said that the EFD system improved VAT compliance. Five (50%) of the respondents who gave the reason have said that, the correct amount of VAT will be paid to TRA if EFD machines will be effectively used and the other 3 (30%) said that it is easy to keep the VAT records and save time when using the EFD machines. Weru *et al.* (2013) also found out that, ETR system assisted in improvement of tax compliance in Kenya. Therefore this is an indication that, EFD system has improved VAT compliance to the majority of VAT registered traders. Despite of that, 4 (57.1%) of those who said EFD system did not improve VAT compliance was due to the fact that VAT rate is too high and the other 2 (28.6%) said it is because of the challenges of using EFD machines. This shows that the EFD system did not improve VAT compliance to the minority of the respondents.

All the key informants of the study argued that, the EFD system has improved VAT compliance among the VAT registered traders because of the benefits of using these machines. This system assisted the VAT registered traders to update VAT records, save time during VAT remittance and produce both internal and external business reports which are very important in the operations of the business. In addition to that, the system is more accurate than the manual system as it has removed challenges and conflicts that occurred between the taxpayers and the TRA officers during the VAT remittance.

Newcomb (1943) and Cascio (1986) in Nyasha *et al.* (2012) mentioned the same benefits as explained by the key informants but more benefits such as control of file transfer, automation reconciliation of Tax returns declaration and compliance testing of bank files were added. Other benefits to customs automation includes, it is easier to focus on inspecting high-risk consignments and possibility of submitting Tax returns declarations on-line.

Table 4.4 shows the respondents with VAT compliant and non- VAT compliant attitude among the VAT registered traders. As observed in Table 4.4, majority of VAT registered traders have a VAT compliant attitude. Razak and Adafula (2013) attested that, there is a strongly positive relationship between a taxpayer's compliant attitude and the level of tax compliance. This mean that the tax compliant attitude of the taxpayer has the impact on the tax compliance of the taxpayer. If the compliant attitude is high then compliance level is high and vice versa is true. Based on this fact, the level on VAT compliance among the VAT registered traders is still high despite of the introduction of EFD machines. This was also revealed in the study which was conducted in four selected countries namely Uganda, Kenya, South Africa and Tanzania. It was found out that, only Tanzania and South Africa seems to have VAT compliant attitude (Ali *et al.*, 2012).

As observed in Table 4.5 and Table 4.6, VAT compliance among the VAT registered trader's declined in the financial year of 2010/11. This was the year in which EFD machines were firstly introduced in Tanzania. The decline of VAT compliance during the financial year 2010/11 was caused by the resistance in the use of EFD machines by some of the taxpayers and at that time it was a new system. There was lack of knowledge concerning the EFD machines and the VAT registered traders were not aware of the benefits of using the EFD machines.

From the interview with the key informants, VAT compliance started to increase from the financial year of 2011/12 because the traders were better informed and the response to the use of machines by traders became positive and some of the traders learned from early adopters of the machine. A study by Gardner, Dukes and Discenza (1993) in Nyasha *et al.* (2012) also identified a positive correlation between experience with electronic devices and attitudes towards them. Naibei *et al.* (2012) empirical results revealed that, effective and regular use of ETR has a significant impact on the VAT compliance ($R=0.622$, $p<0.05$). This is in agreement with this study that, there is a positive relationship between the use of EFD machines and VAT compliance by the respondents.

5.2 Quality of EFD system in sealing the loopholes for VAT evasion

As observed in Table 4.7, majority of respondents said that EFD system is ineffective way of sealing the loopholes for VAT evasion. The reasons for ineffectiveness was given by 7 (38.9%) of the respondents who said that, still some of the traders keep two books one for EFD receipts and the other one for written receipts. This gives the room for VAT evasion because the TRA officers normally focus on the EFD receipts book and the other book is always hidden by the taxpayer. Other 11 (61.1%) of the respondent said the customers normally do not demand for EFD receipts after the transaction. The customers who demand the receipts are those from the Government or private organization. Other studies have shown that the ETRs sealed the tax evasion loopholes (Taye, 2011; Weru *et al.*, 2013). The findings are contradicting probably because the researches have been done in different countries using different methodologies.

As observed in Table 4.8, majority of the key informants argued that the EFD machines are able to seal the loopholes for VAT evasion if they will be effectively and efficiently be used by the VAT registered traders. It is difficult to evade paying VAT using the EFD machines because these machines record all the transactions done by the VAT registered traders and at the end of each day the VAT registered trader is required to send a Z report to TRA. But these machines are not efficiently used by VAT registered traders therefore they evade paying VAT. Several time TRA officials caught VAT registered traders who are using fake EFDs (unregistered devices by TRA), forgery receipts are issued by traders, and some have bought the devices but they are not using those devices properly. Once the TRA came with the new system to crab VAT evaders the VAT registered traders also came up with the new way of evading paying VAT. This study has also found out that, once the VAT registered trader is caught by TRA official, the bribes are normally given by the VAT registered traders so that further legal action should not be undertaken. Therefore the problem is not the machines but to all the individuals involved in the tax system such as customers, VAT registered traders and TRA officials.

Table 4.9 shows the response rate on the awareness of VAT registered traders towards the loopholes for VAT evasion. As observed in Table 4.9, majority of respondents are aware of the loopholes for VAT evasion as it has been stated above. Many studies have shown that, taxpayers awareness on the loopholes for tax evasion increases the amount of tax revenue loss especially in developing countries (Akram & Mughal, 2012; Adebisi & Gbegi, 2013; Emenike, 2014;). This fact made Weru *et al.* (2013) to conclude that, the majority of the business community are aware of the loopholes and therefore it is possible to seal the loopholes fully.

The reasons given by respondents for evading paying VAT are shown in Table 4.10. The mostly frequently stated reasons are VAT is too high and there are so many taxes. This means that, VAT rates are perceived as too high both in terms of what VAT registered traders can afford and in terms of what is reasonable. The study of Ali *et al.* (2013) shows that, poor public services to be the main reason why some people evade taxes in Tanzania. The differences of findings is due to the fact that, this study focused on VAT registered taxpayers only while Ali's *et al.* (2013) study comprised of all kinds of taxpayers.

Akram and Mughal (2012) ranked top five reasons/causes of tax evasion in which no public enlightenment campaign; lack of adequate tax incentives; poor relationship of tax payers and authority; proliferation of taxes and lastly illiteracy of tax calculation. The study's findings differ with this study probably because they have been done in different countries operating in the different tax systems. The study was done in Pakistan while this study was done in Tanzania.

5.3 Capacity of using the EFD machines

Table 4.11 illustrates the response rate on the adequacy of training on the use of EFD machines and the capacity of using the machines. As observed in Table 4.11, majority of respondents agreed that, they have been provided an adequate training about the use of EFD machines and therefore the capacity of using the machines has increased. On the other hand, 11 (100%) of respondents who said the training was not adequate was due to the fact that, time was not enough and they still get some challenges when using the EFD machines. Arthur (1990) in Nyasha *et al.* (2012) propounds that individuals with low educational levels may consciously opt not to become familiar with EFD system due to the challenging nature of the technology. The theory shows that the traders with low education ability will find it is difficult to use the EFD machines.

This study found out that, majority of respondents know how to perform important things on the EFD machines which are issuing the EFD receipts, daily sending of Z report to TRA, keeping records and producing both internal and external reports. In general the results suggested that the VAT registered traders are effectively trained on the use of EFD machines. These findings do not concur with the findings of Weru *et al.* (2013) who found out that, the stakeholders were yet to be trained effectively on the use of ETR machines in Kenya.

Based on Table 4.12, the findings indicate that suppliers and seminars are among the major means through which EFD knowledge was imparted to the taxpayers. The results are different to the findings obtained by Machogu and Amayi (2013), which concluded that studio, newspapers and workshops were the most efficient means of delivering taxpayer education. The differences in findings may be due to the fact that, this study focused on the taxpayers training on the use of EFD machines while the other studies put their attention on the basic tax laws and procedures, and taxpayers rights and obligations.

In addition to that, Table 4.13 revealed that suppliers and seminars have played a big role in increasing the capacity of the VAT registered traders on the use of EFD machines. According to the key informants, suppliers played a big role because they are knowledgeable and experts on the use of EFD machine. The training of this new technology requires someone who is an expert and knowledgeable about the machines. On the other hand, seminars organized by TRA helped the taxpayers to understand the importance of shifting from the manual work to the new automated system. After sensitization seminars, the attitudes of the taxpayers changed and the system gradually accepted by VAT registered traders. These two Medias were used in Kenya as explained in the study of Weru *et al.* (2013), therefore TRA adopted the same media to train its taxpayers and it succeeded in Tanzania as shown in the findings of this study.

CHAPTER SIX

SUMMARY, CONCLUSIONS, AND POLICY IMPLICATIONS

6.1 Summary

This study has been commissioned with the purpose of evaluating the contribution of EFD system on VAT collection. The study has been stimulated by the fact that, since the introduction of EFD system in Tanzania, the business atmosphere and the tax system has been disturbed by a lot of national wide strike of business community, a lot of complaints from traders about the use of EFD machines and many conflicts between the government through TRA and the traders which led the national leader of traders' community to be kept in remand.

It is from this perspective that, this study assessed the influence of use of Electronic Fiscal Devices (EFDs) on Value Added Tax (VAT) collection among the VAT registered traders in Morogoro Municipality, Tanzania. The research objectives were: to explore the status of EFD system on improved VAT compliance, assess the quality of EFD system in relation to sealed loopholes for VAT evasion and to investigate the capacity of the VAT registered traders on the use of EFD machines.

The study adopted case study research design. A sample size of 39 respondents and 11 key informants were selected using a simple random sampling technique. Primary data was collected using self-administered questionnaires and the interview while secondary data was collected from documentary review. Descriptive statistics were successfully used to answer the research questions and achieved the research objectives developed.

It was found in the discussion that the use of EFD system had a significant improvement on VAT compliance. The study also found out that the EFD system reduced the loopholes for VAT evasion but it did not seal all the loopholes that existed before the introduction of EFD system. Lastly, the study found out that the VAT registered traders were effectively trained on the use of EFD machines because majority of the respondents know how to perform the important activities in the EFD machines.

6.2 Conclusion

TRA has adopted the EFD automated system since 2010 for VAT registered traders. The use of EFDs in Tanzania has been increasing in the past 5 years. Based on the major findings of the research, the study concludes the following:

- i. The EFD system has improved the VAT compliance among the VAT registered traders. The EFD system helps the VAT registered traders to update the records, save time during VAT remittances, improved sales audit and decrease the compliance costs. These four major reasons improved VAT compliance among the VAT registered traders in Morogoro Municipality, Tanzania.
- ii. The EFD machines were not effective in sealing the loopholes for VAT evasion. The reason for ineffectiveness was that some of the traders evade VAT by keeping two books one for EFD and the other to provide receipts for customers without charging VAT. Many customers collaborated with traders due to hard economic situation and opted to buy goods/services without being issued the EFD receipt. In addition to that, if the trader is caught by the TRA officers that he/she did not issue the EFD receipt then the bribe is normally given to the TRA officers so that further legal action is not undertaken by the TRA officers. This is a way in which traders, customers and the TRA officers engage in corruption offences.
- iii. Lastly, the study concludes that the training given by TRA through the suppliers and seminars increased the capacity of using the EFD machines. It is further concluded that TRA organized trainings for all the stakeholders and it was after training that the attitudes towards EFD system changed and the system was gradually accepted by the VAT registered traders.

6.3 Policy Implications, Limitations and Further Research

6.3.1 Policy Implication

The Government of Tanzania made a lot of efforts to strengthen the collection of domestic revenue by taking various policies and administrative measures. In terms of policies this study falls under the revenue policies of the Government. These policies provide a guiding and regulatory environment through which the tax system will be operated.

In a bid to combat tax evasion, the Ministry of Finance provided a hotline number and e-mail address to receive complains on the problem from the public. Beside of the existing policy guideline, the tax system continues to experience VAT evasion among the VAT registered traders. This is because, the directive started in the policy guideline is not enough to stop VAT evasion. The policy implication of this is for the Government through TRA to come up with more superior system which can detect any form of corruption, falsification and fraud.

In terms of taxpayer's education, the policy stated that it will continue strengthening and ensure effective use of EFDs as well as providing taxpayers education on the use of these devices (machines). In order to improve the capacity of using the EFD machines, other medias should also be used in training programme rather than focusing in suppliers and seminars only. This is because, some of the taxpayers do not understand well when the media used to train them is seminar and supplier. Therefore introducing other media such as workshops, studio, newspaper and pamphlet will increase the understanding and capacity of the taxpayers on the use of EFD machines.

As observed in the findings, the VAT compliance among the VAT registered traders has been improved because of the benefits of using the EFD machines. Therefore, revenue policies should be reviewed in order to increase the benefits of using the EFD machines and remove the challenges of using these machines so as to improve the VAT compliance level among the VAT registered traders. Additional features should be added to the EFD machines so as to increase the benefits of using the machines and those features which lead to the challenges of using EFD machines should be removed.

6.3.2 Limitations of the study

This study faced two major limitations. Firstly, it was difficult to gather some of the important information from VAT registered traders due to the interference with their daily routine and some of the taxpayers declined to participate in the research because they were suspicious that the researcher may have been a TRA inspector disguising himself as a researcher. Secondly, there are few scholarly literatures concerning the EFD machines in Tanzania. EFD system is a new phenomenon introduced in Tanzania and not all the countries use EFD machine. Therefore this study has been supported by few scholarly literatures.

6.3.3 Area for further research

No previous study has focused on EFD machines; therefore this study opens the door for future research concerning the EFD system in Tanzania. Several suggestions for further research have been identified. Firstly, a similar study using the other research methodologies should be undertaken to VAT and Non VAT taxpayers. Other methodologies are needed to explore further on the level of tax compliance and tax evasion among the users of EFD machines. It is expected that using other methodologies for example survey research design will produce other meaningful results. Secondly, a study should be done to see the contribution of EFD machines in the financial performance of the business organization. Finally, the increase of VAT collection is attributed by many factors; therefore there is a need to research on the contribution of the EFD system alone on the increase of VAT collection.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR VAT REGISTERED TRADERS

1. Preliminary Information

Please tick (✓) the correct answer in the following questions.

1.1 What is the activity in which your business is engaged with?

Service giving [] Merchandising [] Manufacturing []

Other, Specify _____

1.2 What is the gender of the owner of the business?

Male [] Female []

1.3 What is a legal form of your business?

Sole proprietorship [] Company [] Joint venture []

Others, Specify _____

1.4 When was your business registered to collect VAT?

Year 2008&below [] Year 2009-2010 []

Year 2011-2012 [] Year 2013-2014 []

1.5 When did your business start to use EFD machines?

Year 2014 [] Years 2013 [] Years 2012 []

Years 2011 [] Year 2010 []

2. VAT Compliance

2.1 Does EFD machines improve VAT compliance among the VAT registered traders?

(Please tick as appropriate)

Yes [] No []

Give reasons:

2.2 At the end of each of the following financial year, indicate whether you declared an accurate VAT liability on a particular financial year or your VAT liability contained error and therefore an additional VAT with fine/penalty was assessed through auditing.

(Please tick as appropriate)

YEAR	I declared an accurate VAT liability on a particular financial year.	VAT liability contained error and therefore additional VAT was assessed through auditing.
2009/10		
2010/11		
2011/12		
2012/13		
2013/14		

2.3 State your opinion about other people who do not pay VAT that they owe on their income. (Please tick as appropriate).

Not wrong at all [] Wrong but understandable [] Wrong and punishable []

2.4 Please tick (√) the appropriate choice of your response that shows your level of agreement and disagreement to the statement provided.

S/N	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	EFD system is friendly to your business.					
2	It is very simple to use EFD machine.					
3	EFD system is an effective way of enhancing VAT collection in Tanzania.					
4	Cheating on taxes is justifiable in light of the unfairness of the tax system.					
5	Tax is something which is taken away from me.					
6	If everybody evades taxes, one can hardly be blamed for doing it.					
7	There is nothing bad about under-reporting taxable income on one's tax return.					
8	Since the government gets enough taxes, it does not matter that some people evade taxes.					
9	If in doubt about whether or not to report a certain source of income, I would not report it.					
10	Taxes are so heavy that tax evasion is an economic necessity for many to survive.					

3. VAT Evasion

3.1 Is EFD system very effective in sealing the loopholes for VAT evasion? (Please tick as appropriate).

Very Effective [] Effective [] Not Effective []

Give the reasons:

3.2 Are you aware of the loopholes that can be used to seal VAT evasion? (Please tick as appropriate).

Fully Aware [] Slightly Aware [] Not Aware []

Which are they? _____

3.3 Does the customers insists on the issuance of EFD receipts after the transaction? (Please tick as appropriate).

Yes [] No []

3.4 How easy or difficult is it to avoid paying VAT that you owe to the government after the introduction of EFDs? (Please tick as appropriate).

Very easy [] Easy [] Neutral [] Difficult [] Very Difficult []

3.5 What do you think is the main reason that some of the VAT registered traders still evade paying VAT following the introduction of EFD machines?

4.5 To what extent of do each of the following media plays in giving you education/training about the use of EFD machines? Could you please scale them?

1: Very low role 2: Low role 3: Neutral 4: Big role 5: Very big role

Supplier	Television	Radio	Pamphlets	Newspaper	Seminars

Other (please specify and scale them): _____

THANK YOU FOR YOUR COOPERATION

APPENDIX 2: INTERVIEW GUIDE FOR VAT EXPERTS

1 Preliminary Information

1.1 Personal information

Gender: Male [] Female []

Age: 20 -30 [] 31-40 [] 41& above []

1.2 Educational level

Diploma [] First degree [] Second degree [] above []

Other: _____

1.3 Work experience:

Less than 5 years [] 5-10 years [] above 10 years []

2 EFD Machines

2.1 What triggered the introduction of EFDs in Tanzania?

2.2 Which policies and procedures were used to develop EFD system?

2.3 What were the requirements on registration of EFDs system?

2.4 Does EFD machines improve VAT compliance among the VAT registered traders?
(Please tick as appropriate)

Yes [] No []

Give reasons:

2.5 Is EFD system very effective in sealing the loopholes for VAT evasion? (Please tick as appropriate).

Very Effective [] Effective [] Not Effective []

Give the reasons:

2.6 Does the VAT trader gets training about the use of EFD machines? (Please tick as appropriate).

Yes [] No []

Who gave them such training and why: _____

2.7 Does the training given increase their capacity of using the EFD machines? (Please tick as appropriate).

Yes [] No []

Give the reasons:

2.8 According to your own opinion, why do the taxpayer resisted to use EFDs machines?

2.9 What are the strengths of using EFDs as compared with the traditional/manual work methods?

THANK YOU FOR YOUR COOPERATION