THE IMPACT OF EFD ON VAT COLLECTION IN TANZANIA: A CASE OF MOROGORO MUNICIPAL

By

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A Dissertation Submitted in Partial fulfillment of the Requirement for the Award of the Degree of Master of Science in Accounting and Finance of Mzumbe University

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled, **The impact of EFD on VAT collection in Tanzania: The case of Morogoro Municipal,** in partial fulfillment of the requirements for award of the degree of Master of Science in Accounting and Finance (MSC: ACCOUNTING & FINANCE) of Mzumbe University.

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I, **Wiston J. Mlima**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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Date ……

ACKNOWLEDGEMENT

I would like to express my sincere appreciations to every person who assisted me morally and materially in fulfilling this work which at the orientation seemed to be tough and boring.

It is difficult to pass my thanks to every person through this paper. To mention but few, my special thanks to Tanzania Revenue Authority (TRA) specifically Morogoro Tax Region for their maximum support during the whole period of my research.

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Lastly but not the least I would like to pass my thanks to my family especially my wife Neema Malugu and my son John for their passion as sometimes I had to spend most of my time on research thus missing my presence.

LIST OF ABBREVIATIONS

EFD(s)	-	Electronic Fiscal Device(s)
EFDMS	-	Electronic Fiscal Device Management System
EFJ	-	Electronic Fiscal Journal
EFP	-	Electronic Fiscal Printer
ESD	-	Electronic Signature Devices
ETR	-	Electronic Tax Register
GPS	-	Global Position System
TCCIA	-	Tanzania Chamber of Commerce, Industry and Agriculture
TIN	-	Taxpayer Identification Number
TRA	-	Tanzania Revenue Authority
Tshs	-	Tanzanian Shillings
URT	-	United Republic of Tanzania
VAT	-	Value Added Tax
VRN	-	Value Added Tax Registration Number
VAT1AMOUNT	-	Amount of VAT from taxable goods and services at 18%
VAT1NETT	-	Amount of sales exclusive of VAT
VAT1RATE	-	VAT rate for taxable goods and services at a rate of 18%
VAT2	-	Amount of VAT from goods and services charged at zero
VAT2 NETT	-	Amount of sales charged at zero
VAT2 rate	-	Zero rate of VAT
VAT3	-	Amount Amount of VAT from exempt and special relief
VAT3 NETT	-	Exempt and special relief
VAT3 Rate	-	Exempt rate and special relief
X -REPORT	-	Summary of Interim sales before closure of business
Z- REPORT.	-	Summary of daily sales after closure of business
Z- Num	-	Z report serial number

ABSTRCT

This study aimed to assess the effectiveness of Electronic Fiscal Device (EFD) in the collection of Value Added Tax. Since many researchers had concentrated much of their works on tax systems, tax evasion, taxes and interest rates, a lot was desired especially in this area to assess the effectiveness of Electronic Fiscal Device which had been recently introduced by the Tanzania Revenue Authority much more on VAT collections. The study aimed to establish if the Electronic Fiscal Device had increased the collection of VAT and if there are any associated costs in using them. However the general purpose of this study was to determine by how much EFD has increased or decreased the collections of VAT since its introduction in 2010. The population under study comprised of 248 VAT registered taxpayers with EFD in Morogoro according to the regional TRA office's records which were stratified into; service providers, wholesalers & large scale retailers and supermarkets. The main instrument of collecting primary data was questionnaires while secondary data were obtained from the TRA regional office. Analysis of data was mainly done using descriptive statistics. The findings of this research project will assist the Tanzania Revenue Authority on looking ways of improving the collections of VAT and ways of administering and using of EFD by VAT traders. Due to limited sources of literature, this research was not considered as exhaustive but could form the basis for further investigation. Data were collected from 80 registered VAT traders in Morogoro town. The respondents were senior, middle level and low managers and owners of business. Out of the 80 registered VAT traders to whom the questionnaires were administered, 80 of them responded to the questionnaires except to some questions which seemed to be difficult. This gave a response rate of 100 percent. Data analysis tools used in the research was an Excel and data were presented in form of tables. Based on the results from data analysis and findings of the research, one will safely conclude the following; First, Tanzania has witnessed significant changes in many aspects of its economy over the last five years, but like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries (Karingi, Wanjala, and Dec, 2005).

Second, there is net increase of 38% in VAT collections since the introduction of EFD as per Morogoro tax region based Morogoro town. Third, EFDs are not cost effective to VAT traders on using them. Fourth, EFD is cost effective for the revenue authority in terms of

acquisition and administration. Firth, EFDs have so many challenges and problems to traders, and the revenue authority. Sixth, traders are not aware of their legal obligation over the usage of EFDs. Seventh, EFD regulations are not properly complied by taxpayers. Eighth, involuntary tax compliance and other EFD challenges were the major reasons to why traders are not complying with the EFD provisions.

Lastly the study have left a gap for other researchers to find out on the awareness of the general public who are the taxpayers on the use of EFD and compliance of EFD provisions by the supplier of the devices**.**

Also this research has left a gap to quantify the extent at which other factors like increase of population, increase of middle class earners, increase of businesses with high output taxes than input taxes such as hotels and other economic factors have increased VAT collections.

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CHAPTER ONE
INTRODUCTION AND BACKGROUND INFORMATION

1.1 Background to the study

Since the establishment of Tanzania Revenue Authority (TRA) in 1996 under the Tanzania Revenue Authority Act chapter 399 of the laws (Principal Legislation) revised Edition of 2006 the major concern among other functions has been on increasing central government revenues as it is through these revenues the government can finance its various projects which are keys to economic development. In many developing countries, a lack of public service provision slows down economic growth and undermines efforts to improve the living standard of the population.

There are a number of reasons for the failure of many governments in developing countries to collect sufficient tax revenues. According to Nightingale (2002) "No one really likes paying taxes yet they are inevitable for the provision of social welfare". James and Nobes (2009) and Nightingale (2002) while citing (Smith, 1776) posit that a good tax should have the qualities of equitability, efficiency, neutrality, flexibility and simple. These principles still holds today and even act as a guide for policy formulation. However, the ability to achieve all in a single tax policy is practically impossible; hence Nightingale (2002) stated that there is no good tax. This is because an efficient tax might be inequitable.

In (2011) the commissioner General for Tanzania Revenue Authority reported that,
In 2005, the average tax revenue to GDP ratio in the developed world was approximately 35%. In the developing countries, it was approximately 15%, and in the poorest of these countries, the group of low income countries, tax revenue was just 12% of GDP. While in Tanzania in the financial year 2004/2005 and 2009/2010 the average tax revenues to GDP were approximately 10.8% and 14.6%respectively. This gap can partly be explained by the fact that demand for public services increases more than proportionally as income rises. But it also reflects weaknesses in the ability of developing countries to raise the revenue required for the provision of adequate public services. However TRA has been working out to increase the revenue collections to GDP by setting different strategies depending the

nature and type of tax. Strategies have been set to VAT too due to its unstable growth and low contribution to total revenue. In (2011) the commissioner General for Tanzania Revenue Authority reported further that in 2001 VAT and other income taxes contributed only 30% while large tax payers contributed 70% of revenue collected by Domestic revenue department. However strategies such as introduction of EFD in 2010 and review of VAT structure were proposed to be done purposely to increase VAT collections. The report of the commissioner general had proved, there was a problem on VAT collections and thus why EFD has been introduced to boost collections. This gave the researcher enough confidence and courage to conduct a research to see if there is any positive change on the VAT collections since the introduction of Electronic Fiscal Device.

1.2 Statement of the problem

In July, 2010 TRA introduced Electronic Fiscal Device as one among other strategies towards increasing collections of Value Added Tax. The Electronic Fiscal Device (EFD) has 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 (Finance Act, 2010). The system aimed at allowing the tax officers to get correct sales information from business people, reduce tax collection costs and helping businesspeople to comply with the Value Added Tax (VAT) regulations among others. For this case EFD is very popular to VAT traders as it has become part and parcel of their business life. Also the introduction of EFD to VAT registered traders was termed as EFD phase one.

Since the introduction of EFD, different stakeholders such as law makers, public, suppliers of the machines, taxpayers, TRA itself, regulatory bodies such as TCIA and other revenue authorities of different countries which have not adopted this system have been eager to know its contribution on revenues. Likewise the debate has been on whether the system benefits the traders. TCCIA (2012) pointed out that there are challenges on the use of EFD by both VAT traders and TRA in the other hand. Earlier indications were that it assists traders in such ways as;

Lumumba O.M., Obongo B. M *Magutu O. P*, (2010) on their study of the effectiveness of electronic tax registers in processing of value added tax returns pointed out that EFD,

Saves time initially wasted in perusing of records. Reduction in tax preparation costs for example those paid to tax agencies. Reduction in labor costs e.g. Overtime cost, good record keeping – increases profits. Increases efficiency in businesses. Reduces costs of tax refund claims. This study was therefore conducted to ascertain if this was really the case and to what extent this has been possible. Also the adoption of Electronic Fiscal Device by traders as a means of processing daily sales has been a court battle for a long time.

Traders claimed that there were punitive operating expenses that the TRA was unwilling to bear besides the actual cost of the machine especially on second purchase of machine. On the contrary TRA was of the view that the EFD machines help increase efficiencies in operations as well as in VAT collections and compliance. It was therefore important to assess the effectiveness of EFDs by traders in processing sales and if their use had also assisted the Tanzania Revenue Authority to collect as much VAT as possible. However this research aimed at finding and analyzing the impact of Electronic Fiscal Device (EFD) adoption as a VAT collection strategy on increasing VAT collections in Tanzania as well as responding to different questions of stakeholders on EFD, exploring VAT traders in Morogoro region.

````1.3 Research Questions:

The study intended to answer the following research questions:

(i) Have EFDs increased/decreased VAT collections?

(ii) Is the use of EFD cost effective to both VAT traders and revenue authority?

(iii) What are the major problems encountered on administering the use of EFD?

(iv) Are VAT traders aware of EFD regulations and their obligations on using the EFD?

(v) What are the reasons for taxpayer's noncompliance of EFD provision?

1.4 Objectives of the study

1.4.1 Main Objective

The general objective of the study was to assess the impact of EFD on VAT collections.

1.4.2.Specific Objectives

The study intended to achieve the following specific objectives:

(i) To examine the increase or decrease of VAT collections since introduction of EFD.

(ii) To find out the cost effectiveness of EFD by VAT traders and TRA on using them.

(iii) To examine the problems and challenges faced on administering usage of EFD to traders and the revenue authority.

(iv) To find out the awareness of traders on EFD regulations and their legal obligations to the use of Electronic Fiscal Device

(v) To find out possible reasons for traders noncompliance of EFD provision.

1.5 Significance of the Study

This study is important because the government revenue collection performance is part and parcel of public expenditure in social, economic and administrative sectors. This study will shed light to decision makers such as government in reviewing the existing return processing system and policy components influencing the performance of TRA.

The findings of this study will also be useful to different stakeholder including the government and other policy makers in reviewing and formulating relevant policies that will enable the government to improve its VAT collection and all tax revenue collections as a whole.

The study will also contribute to both theory and policy by creating a source of home tailored literature for future use in Tanzania as far as VAT revenue collection is concerned. Given the novelty of this area of investigation, future researchers will be aroused for making more enquiries as broadly and robustly as possible. The study report will enrich the researcher's capability to do research, and will serve as a reference material to other scholars.

1.6 Delimitations and Limitations of the study

The coverage of the survey was mainly in Morogoro region. This was due to budgetary constraints faced by the researcher. In addition, the time factor was a constraint because the researcher was working full time at Tanzania Revenue Authority-Morogoro Tax Region while doing the research. Poor response rate to questions was a barrier as most traders were reluctant to give out their opinions about tax issues. Also a literature for review was a limitation considering that EFD is still an emerging issue in terms of publications leaving away leaflets and TRA magazines.

1.7 Scope of the study:

The coverage area or the area under which research were conducted was Morogoro tax region only the twoness/ municipality considering easiness on data access and cost as the researcher was a Morogoro town dweller. Also only one region had been chosen under assumption that the behavior patterns of traders all over the country are almost similar. Also the VAT administration strategy of using EFD is as well similar to all tax regions.

CHAPTER TWO
LITERATURE RIVIEW

2.1 Introduction

This chapter reviewed the literatures from different studies in order to capture ideas and arguments which guided the development of the study. It is based on theoretical literature review, literature review from earlier studies and theoretical framework.

2.2 Theoretical literature review

Baurer (2005) argued that it is a well-known fact that the revenue generated from the taxation of individuals and businesses is an important stream of income for government. In an economy like ours that is struggling to remain afloat, it is even more important. Tax revenue is the source of funds used for development projects such as provision of infrastructure like good roads, stable power supply, stable water supply etc. All of which combine to create an enabling environment for businesses –and in turn the economy at large- to grow. However, Bofah (2003) stated that tax revenue collection is one significant issue of economic development among others. It has been said that 'what the government gives it must first take away'. Because the economic resources available to society are limited and so an increase in government expenditure normally means a reduction in private spending. Taxation is one method of transferring resources from the private to the public sector, but there are others i.e. creation of more money, to charge for the goods and services it provides or to borrow. Taxation has its limits as well, but they considerably exceed the amounts that can be raised by resorting to the printing press, charging consumers directly, or borrowing. So while governments often use all four methods of raising resources, taxation is usually by far the most important source of government revenue (Chaudhry, 2010). As important as tax revenue is to a nation, many people still find it difficult to comply with their tax obligation. According to Nightingale (2002) "No one really likes paying taxes yet they are inevitable for the provision of social welfare".

James and Nobes (2009) and Nightingale (2002) while citing (Smith, 1776) posit that a good tax should have the qualities of equitability, efficiency, neutrality, flexibility and

simple. These principles still holds today and even act as a guide for policy formulation. However, the ability to achieve all in a single tax policy is practically impossible; hence Nightingale (2002) stated that there is no good tax. This is because an efficient tax might be inequitable. According to Lamb *et al* (2005) "An efficient tax may not necessarily be considered fair and one that is considered equitable may not be efficient". Ordinarily, people abhor tax payment due to its effect on their income. Owens (2006) noted that only a few people are enthusiastic about paying tax. Tax policy must be generally accepted by the people if it must gain compliance (Nightingale (2002). It therefore means that a good tax system must be in consonance with (Smith, 1776) cannon of taxation. World Bank (2002) stated that the tax system in Tanzania is still complicated and non-transparent. Moreover, Luoga (2002) pointed out that tax legislation is unclear and causes random and partly ad hoc collection procedures. Assessors are considered to have wide discretionary powers to interpreting tax laws, for instance, to allow or disallow expenses or charges or to exempt import duty on items imported. Therefore, reforms of tax legislation and procedures, including measures to improve transparency in the taxpayer–tax officer relations, should take place concurrently to reduce opportunities for corruption and the demand for corrupt services (Luoga, 2002).

Bofah (2003) argued that literacy rate is by far the most important element in success of tax revenue collection while the backbone of an effective tax system is the documentation of the economy. Documentation comes from a literate tax base. In the present day world literacy does not only being able to keep records on books but also includes knowledge of information technology and its usage. Taxes yield less revenue in less literate economies. Tax collection requires consistency in implementation and consistency in implementation comes with political stability. Taxes, law and order situation is indirectly related. A country with stable law and order situation would mean greater investment being brought in, more jobs being created, resulting in greater purchasing power on the part of the consumers who effectively have to pay tax. Awareness to the people on the benefits of paying taxes which increase the tax morale of the people should be brought as long run policy implication (Bahiigwa *et al*, 2004).

2.2.1 Origin of VAT

Value Added Tax (VAT) is a type of sales tax. Other countries like Canada and Singapore call it as goods and services tax. It is a form of indirect taxes that is collected from someone but the tax burden is borne by somebody else who is the final consumer of the taxable goods and services (Allingham et al, 1972). VAT was introduced just before the First World War, turnover tax or VAT gradual improvements which came up with a global taxation system of business with VAT as the main element.

VAT was invented by a French economist in 1953.Laure, joint director of French tax authority introduced VAT with effect from 10th April 1954 for large businesses, and extended over time to all business sectors and reached Africa through those countries which were colonized by France such as Ivory coast in the year 1959, Senegal in 1960, Madagascar in 1969. Over the last 20 years, a large number of countries have implemented major tax reforms, mainly by adopting value-added tax (VAT). As a result, at the beginning of the 2010s, more than 130 countries worldwide had VAT, and among the developing countries, around 70% (104 out of 144 countries) had adopted this kind of indirect taxation.[1]VAT has tended to spread in regional bursts, in countries participating in International Monetary Fund (IMF) programmes and in countries with a low tax revenue performance in the past. The consistent support and advocacy of this form of taxation by the IMF and others in a variety of countries, first in Latin America, and then around the world, encouraged and facilitated the adoption of VAT by countries with much less developed economic and administrative structures than those in the original EU member states.[2]

[1]Keen, M. and B. Lockwood (2010) "The Causes and Consequences of the VAT Revolution: An Empirical Investigation", *Journal of Development Economics,* 92, pp.138-151.

[2]Richard M. Bird and Joseph L. Rotman (2005) Value-Added Taxes in Developing and Transitional Countries: Lessons and Questions. Prepared for the First Global International Tax Dialogue Conference on VAT; Rome, March 15-16, 2005

VAT operates in many countries in Africa. Among those countries include Kenya in 1990, South Africa 1991, Uganda 1996, Cameroon 1998 and Rwanda 2001. **VAT has become more and more important in many jurisdictions as tariff levels have fallen worldwide due to trade liberalization, as VAT has essentially replaced lost tariff revenues.**

Whether the costs and distortions of VAT are lower than economic inefficiencies and enforcement issues like smuggling from high import tariffs is debated, theory suggests VATs are far from efficient (Waweru, 2006).In Tanzania it was established in July 1998. Therefore VAT is the abbreviation of the word Value Added Tax which means tax imposed on additional value of goods or services produced or sold. The current rate imposed on such additional value is 18%. VAT is a tax on consumer expenditure, which is levied on the supply of taxable goods or services by any business that is registered for VAT purposes. Any trader dealing with taxable supplies with annual turnover of greater or equal to 40,000,000, or is expecting to surpass this threshold, or by the power of Commissioner is supposed to be registered for VAT, Section 19of VAT Act 1997. Most business transactions involve supplies of goods or services; these must be for the furtherance of the businesses. VAT is also levied on the importation of goods or services in certain circumstances. Each registered person in the chain between the first supplier and the final consumer/purchaser/user is charged tax on taxable supplies made to him(input tax) and charges tax on taxable supplies made by him(output tax). He pays over to the revenue Authority the excess of output tax over input tax or recovers the excess of input tax over output tax from the Authority. Normally the burden of the tax falls to the last consumer/purchaser leaving the business unaffected.

2.2.2 Electronic Fiscal Device (EFD)

An Electronic Fiscal Device is a machine designed for use in business for efficient management controls in areas of sale analysis and stock control system which conforms with the requirements specified in VAT Act (EFD Regulations) 2010 and dully registered under regulation five of these Regulations

2.2.3 Meaning of being fiscal

Many countries today have special laws in place that make it obligatory for anyone who is selling goods or services to consumers to use cash registers (approved by tax authorities) that have special security features that enable the authorities to check in the reliable way the totals of tax that the retailer has to pay

The Electronic Fiscal Device (EFD) has been introduced to VAT registered traders under the newly introduced "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. The law was effective from October 1, 2010. The EFD is used for issuance of FISCAL RECEIPTS.

2.2.4 Types of Devices

2.2.4.1 Electronic Tax Register (ETR)

Applies to businesses that issue cash receipts manually, or via their cash registers (ECR).

2.2.4.2 Electronic Fiscal Printer (EFP)

Applies to businesses that issue cash sales or invoices via their point-of-sale (POS) system (or PCs).

2.2.4.3 Electronic Signature Device (ESD)

Applies to businesses that issue invoices, fee notes, delivery notes, and other financial documents via an accounting software.

Figure 2:1: Fiscal Devices

Example of ETR

Source:

www.bmtl.co.tz/EFD_devices.html and Field Data EFD Impact, 2013

2.2.5 Special Features of Fiscal Devices

2.2.5.1 Fiscal Seals:

The fiscal devices have got a visible Seal that alerts against outside intrusion. Any damage to the seal, for whatever reason, must immediately be reported to the TRA.

2.2.5.2 Fiscal Memory

It stores all sensitive data such as totals of each tax category and the total turnover. One can only punch in data, but cannot revise or alter data. If any mistake is made while punching in data, one has to go ahead and use another receipt. At the end of the month one will submit

the other receipts to justify that there was erroneous data punched in and the TRA will then make adjustments accordingly.

2.2.5.3 Unique Serial Number

Each ETR has a unique serial number that is securely written in the fiscal memory and assigned to the owner of the security register upon purchase of the device.

2.2.5.4 Unique Specification

This is a set of unique specifications that the software and the hardware of the ETR must follow in order to get the official approval.

2.2.6 Operation of EFD

At the end of each day one must submit a "Z-Report" by pressing a certain button on the device. The "Z" button should be pressed only once a day at the close of the day's business; this action summarizes all the day's transactions and computes the totals. The data (i.e. The Totals) are automatically captured in both the taxpayer's EFD and on the TRA's main server.

The advantage of the "Z-Report" system is evident during tax audits that are occasionally conducted by the TRA officials. With the "Z-Report" system, submission of multitude of documents by the taxpayer for verification purposes during such audits is rendered redundant. What the TRA officials may do is to come with their "memory chip" (with information captured from their main server), insert this chip in the taxpayer's EFD, and compare their data to that of the taxpayer. This would save time, resources and unnecessary arguments that are quite common under the current tax audit system.

Daudi Mboma (2012)[3] shows that the EFD has a Multi-Media Card that is capable of recording all transactions and other information that are printed on the EFD. The first

[3]Daudi Mboma (2012), Challenges to Electronic Fiscal Devices Adoption in Tanzania, Enhancing Tax services in Tanzania.

Electronic Fiscal Journal (EFJ) activates the start of fiscalization and begins recording of the sales data and produces fiscal receipt or fiscal invoices. The activated device will send a message to the TRA central database for registration to enable it to send the first "Z" report. The message contains at least device serial number, date and time of activation, license number of the supplier and user identification number. Whenever the EFJ is removed, the device is supposed to stop functioning until EFJ is reinserted. It is the duty and obligation of the user to replace full EFJ at any point in time. The EFJ assists the Authority to easily search for fiscal data inside the journal than it would be the case with papers. EFJ forms part of the statutory documents required to be maintained by the user.

2.2.7 Initial Purchase

In recognition of the importance of the device, the Government has decided to grant relief on the cost of the device. Taxpayers will not incur a direct cost of purchasing the device. This is because a first time purchaser may claim the whole cost as input tax. (i.e., you pay the cost during the purchase and then you claim back the whole amount in the VAT return) Regulation 28 r.w.1st Schedule, Paragraph1of VAT Act (EFD regulation) 2010. Read also section 16(5) of VAT Act, 1997 with effect from 1st July 2010, The Finance Act 2010.But for the second purchase the whole cost is born by the trader himself.

The companies that have been approved by the TRA to sell, install, repair and educate traders on proper utilization of the machines as prescribed in the Memorandum of understating between TRA and Suppliers.

i) Advantech Office Suppliers Ltd.
ii) Checknocrats Tanzania Ltd
iii) Pergamon Tanzania Ltd.
iv) Total Fiscal Solution Ltd.
v) Compulynx Tanzania Ltd. A and Suppliers are:
vi) Business Machines Tanzania Ltd. (BMTL)

All VAT registered traders are requested to contact any of the above approved suppliers for inquiries pertaining to the devices.

2.2.8 Enforcement

2.2.8.1 Offences

According to Tanzanian Law, it is mandatory for a seller to issue a fiscal receipt for each sale; and it is also mandatory for a buyer to demand a fiscal receipt for a purchase. The Law imposes severe punitive measures to both sellers and buyers who violate this legal requirement. The offences have been categorized as:

.2.8.2 Failure to use EFD

A fine of not less than Tshs. 3 million, or imprisonment for a term of not less than 12 months, or both. This is according to VAT (EFD Regulations) 2010 Regulation20.

2.2.8.3 Fraudulent use of EFD

A fine equivalent to twice the payable tax or Tshs. 4 million, whichever is greater, or imprisonment for 6 months, or both. This is according to VAT (EFD Regulations) 2010 Regulation 21.

.2.8.4 Tempering of EFD and/or Related Software

A fine of Tshs.1 million, or imprisonment for a term not exceeding 3 months, or both. This is according to VAT (EFD Regulations) 2010 Regulation 22.

Failure to comply with Regulation 7 (approved suppliers rights and obligations) and Regulation 10 (user's obligations)

A fine of Tshs 1 million, or imprisonment for a term not exceeding 3 months, or both. Regulation 23.

Failure to demand and retain a fiscal receipt Regulation 29:

Twice the amount of tax evaded as described in regulation 24.

All traders are requested to read, understand and follow the laws pertaining to the EFD in order to avoid inconvenience to their business.

Important Note

If the device develops any failure, a trader should report the incidence in writing, to the supplier and to the Commissioner for Domestic Revenue, within 24 hours. Failure to report attracts a fine of Tshs. 1million. This is properly described under regulation 10(9) of the VAT (EFD Regulations) 2010.

2.3 Literature review from earlier studies

TCCIA (2012) in their study which examined the challenges facing VAT traders revealed that many of the problems experienced by EFD users; besides those related to network and poor quality of EFDs; emanated from inadequate and improper training the users received from the suppliers. As statistics indicated many users complained that the training they received did not give them a sound knowledge in effectively using the machines. Likewise TRA needs to give more emphasis on marketing and creating more awareness to business men on the importance of EFDs for the development of the nation and the VAT-EFD regulations, 2010. There was every sign that this information lacked among businessmen during the study.

Also they recommended the following for better use of EFD,

Translate tax language into Kiswahili, regulations, laws and even TRA website should have a Kiswahili version, for many EFD users to get requisite information, TRA should introduce customer care toll free numbers for assisting EFD users, especially from upcountry, where suppliers and agents are located very far from users; GPS reliance (Vodacom and Airtel) is not necessarily adequate and the best. Customers require a wide choice of all available networks for efficiency in business. This may help to address the problem of network congestion; on quality, each EFD machine should have a TBS approval and mark for the citizens to have confidence in the machines before purchasing. Imports of substandard EFD machines that are in some cases even no longer in use in other countries must be discouraged;

There should be only two steps in becoming VAT registered and acquiring EFD instead of the five steps involved at present;

Traders should be able to purchase EFDs and have them fully installed within a day;

The regulation on servicing of EFDs should be flexible and binding to both the suppliers and users; EFDs supply system needs to be more transparent to avoid unnecessary suspicions;

EFDs must be able to issue receipts containing, name, Address, VAT Registration Number and TIN, Date of supply. Receipts without names are unacceptable, and not necessarily taken as legal documents for reference;

Mboma (2012) on his study of challenges to electronic fiscal device adoption in Tanzania enhancing tax services in Tanzania concluded the same that EFD is to be used in Tanzania while improving challenges associated with the EFD.

Lumumba O.M., Obongo B. M *Magutu O. P*,(2010) on their study of the effectiveness of electronic tax registers in processing of value added tax returns admitted that EFD has improved the process of processing VAT tax returns.

Nabei, K.I & Siringi, E,M.(2011) on their study conducted in Kisumu City-Kenya on the impact of Electronic Tax Register on VAT concluded that use of ETR has significant impact on VAT compliance.

Generally it can be seen that all the early studies pointed above have shown positive impact on the use of EFD.

2.4 Theoretical Framework

This part refers to personal perceptions of the researcher on the impact of EFD to VAT collections, problems and challenges associated with EFD before going into the field searching for information. However the hypothesis of the researcher may be correct or wrong after gathering and analyzing the information. This study was guided with following hypothesis of which was the road map.

Hypothesis one: There is no net increase in VAT collections since the introduction of EFD

Hypothesis two: EFDs are not cost effective to tax payers on using them.

Hypothesis three: EFD is cost effective for the revenue authority in terms of acquisition and administration.

Hypothesis four: EFDs have so many challenges and problems to traders, suppliers and the revenue authority.

Hypothesis five: Both suppliers and traders are not aware of their legal obligation over the usage of EFDs.

Hypothesis six: EFD regulations are not properly complied by both taxpayers and suppliers.

Hypothesis seven: Involuntary tax compliance may be the major reason to why traders are not complying with the provisions and operation cost may be the major reason to why suppliers are not complying the provision.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The importance of research methodology is to enable the researcher focus his objectives of research and provide a systematic way of solving a certain problem, that is, the systematic method of enunciating the problem, collecting data, analyzing data critically and reaching conclusions basing on them. In brief, it entails all the steps the researcher will use for the study.

3.2 Research Design

Research design involves the organization of the collection and analysis of data so as to provide the required information. As argued by Kothari (2004) and Cooper (1998) different types of research designs can be used including exploratory, explanatory, experimental and comparative research designs depending on the nature and purpose of a particular study. A research design, therefore, is deemed to be the blue print for the collection, measurement and analysis of data, the conceptual structure within which the research is conducted.

3.3 Sampling Design, Sampling Procedures and Sample Size

The targeted population for this study comprised of all the registered VAT traders in Morogoro Tax Region with EFD, who were 248 in number as provided by the Morogoro Region Tax office. The population was stratified as follows; 20 Service providers, which was equivalent to 8% of the total population; 193 Wholesalers and large-scale retailers, which represented 77.82% of the total population, 3 Supermarkets which represented 1.2 % of the total population, 14 Civil and Building Contractors which represented 6.65%, 22 Hotels which represented 8.87% and 8 Bars and Restaurants which represented 3.23%.

The Sample was taken as 30% of each group of interviewees According to Nassiuma (2000) p60.

Table 3:1: Categories of Respondents and Sample Size

List of interviewees	Total populatior	Sample size	Sampling technique
Service providers	20	6	Convenience
Wholesalers and large-scale retailers	193	59	Randomly
Bars and Restaurants	8	3	Convenience
Hotels	22	7	Convenience
Contractors and Engineers	14	4	Randomly
Supermarkets	3	1	Convenience
Total	**248**	**80**	
Staff	**77**	**24**	**Convenience**

Source: **Analyzed Data, 2013.**

3.4 Methods of Data Collection

Kothari (2004) argues that research is a way of systematically solving a research problem. Therefore to solve the research problem under the study, both primary and secondary data was collected using several methods. The methods that were used are described below.

.4.1 Primary Data Collection

This involved both the interview and administration of questionnaires methods.

3.4.1.1 Interviews

The interview method was applied by the researcher while holding discussions with VAT registered traders and TRA officers to get their opinion. It was face-to-face interview, which used both structured and unstructured questions.

3.4.1.2 Observations

Some of the information required under the study was obtained by observations using eyes and ears.

3.4.1.3 Questionnaire administration

Pre-designed questionnaires with unstructured and structured questions were distributed to the selected 80 VAT registered traders from Morogoro town who were registered for VAT

before introduction of EFD, to enable the researcher obtain the appropriate data relevant to the study. Distribution and collection were self-administered by the researcher. This method aimed at determining whether EFD is helpful to traders and if it is cost effective to them.

Also some questionnaires were designed and distributed to 24 TRA staffs to check their personal opinions on the EFD apart from empirical data which was obtained from TRA reports as they were key players in the administrations of EFD.

3.4.2 Secondary Data Collection

Secondary data to a large extent were collected from TRAs 2 financial year's reports on the collections of VAT before the introduction of EFD and 2 years after the introduction of EFD from 80 traders who were VAT registered before introduction of EFD.

Thus 2008/2009 and 2009/2010 financial years as well as 2010/2011 and 2011/2012.
The purpose of collecting this kind of data was to get correct analysis on the impact of EFD towards the collections of VAT i.e. if there is a **gross increase of VAT collections** and then **net increase on VAT collection**. Gross referred to before considering inflation, and net increase referred to VAT amount after eliminating the percentage of inflation. Also for the sake of this study 18% VAT rate was applied to have uniformity, putting in mind that before 1st July, 2009 the VAT rate applied was 20%. To a large extent this part of data collection gave a true image as to whether there has been an increase or decrease of VAT collection hence the general impact of EFD on VAT collections.

3.5 Study Area

The study was conducted in Morogoro municipal. The location was selected on the basis that the researcher is living and working in Morogoro municipal. The researcher was also on normal work schedule and concurrently doing the research, hence accessibility to all relevant information became possible.

3.6 Data Analysis

Data are presented in tables, and in narrative form. Analysis of variables relationship was through percentages of occurrences and qualitative analysis of information gathered. Data

analysis tools used in the research considering the nature of research and data there on was Microsoft Excel.

3.7 Reliability and Validity of the study

The reliability and validity of information gathered was depending much on the sampling procedures used, responsiveness of respondents and their understanding about the study. The study is also reliable due to accuracy of secondary data which were obtained from TRA Morogoro Tax region of which the researcher was an employee of the organization. Moreover, the study was more controlled by TRA Act chapter 399 of the laws (revised edition of 2006), Income tax Act chapter 332 of the law (revised edition of 2006) and VAT Act chapter 148 of the laws (revised edition of 2006), EFD Regulation 2010 that regulates the Electronic fiscal devices in Tanzania. Therefore, the conclusions were taken together with these facts.

3.8 Limitations and delimitations of the Study

Time factor was a constraint because the researcher was on normal work schedule while doing the research. Poor response rate to questions was another problem where most registered traders were unable to give out their opinions about the study to particular questions.

However, the researcher tried hard to run with the time and encourage respondents to give out their opinions since the same helps to uncover problems related EFD and suggest possible positive measures. Also lack of literature review occurredconsidering EFD is still a new case hence little references as it is seen on the reference only 6 references touched EFD direct, i.e. EFD Regulations, BMTL website, Research done in Kenya by Lumumba O.M., Obongo B. M *Magutu O. P*. (2010), Daudi Mboma (2012) in Tanzania, research conducted by TCCIA Morogoro in 2012 as well as TRA EFD manuals which were always available at TRA offices.

Small coverage was a limitation of study which was caused by time factor and fund to carry out the project. Note that the study covered only Traders and TRA staffs from Morogoro town. Lastly conflicts of interest mighty have led to biased

conclusion since the researcher was an employee of the organization under study. Preliminary sorting of limitations increased the researcher's punctualityto extent of minimizing the adverse effects of the fore-mentioned limitations thus increasing reliability.

CHAPTER FOUR
PRESENTATION OF RESEARCH FINDINGS, DATA ANALYSIS AND DISCUSSION

4.1 Primary Data

4.1.1 Observations

4.1.1.1 Electronic Fiscal Devices

According to the interviewed TRA officials, the Electronic Fiscal Device (EFD) is a Cash Register fixed with Fiscal Memory. Fiscal Memory is a special Read Only Memory built into the cash register to store tax information at the time of daily sales. EFD can be used as standalone or configured into a network. EFD has special security features e.g. seal, memory, serial no, and special technical specifications.[4]

4.1.1.2 Types of EFDs

From my experience and the knowledge gained in the field, there are three types of EFDs in use depending on the nature of business of the user, these include:

i) **Electronic Tax Register (ETR)** The Device is appropriate and commonly used by retail outlet that issue receipts manually.

ii) **Electronic Fiscal Printer (EFP)** This device is commonly used by computerized outlets. Examples of users of this kind of device include Supermarkets, Petrol Stations and ticketing.

iii) **Electronic Signature Device (ESD)** This device is used by computerized business that issue receipts or invoice via special accounting software. Example of users of this device includes manufacturers, wholesalers.

Note: In this assignment, the Electronic Tax Register (ETR) was identified in most of the areas of the survey. The Device is commonly used by retail outlets that issue receipts manually

[4]TRA, EFDs operation Manual, 2010

4.1.1.3 Operation of EFD

It is a daily routine for a VAT trader to enter every sale made and issue a fiscal receipt to a buyer. This device is operated from opening of the business to closure of the same. Normally the trader enters the item and its quantity first followed by the multiplication sign and price of the commodity then he presses a certain button depending the mode of the device before it prints out the receipt.

Before closure of the business the trader sends a summary of day sale commonly known as Z report summary to TRA server and the trader remains with the print out of the report. But before closure of the business one may require interim day sales summary called x report without sending it to TRA servers. X report is used by TRA officers for reconciliation of sales i.e. cash in till or box against total amount on x report. With this, TRA officials may determine by how much the trader has been issuing receipts.

Table 4:1: Models of EFD

Of the 80 VAT traders visited all had EFD's but with different varieties or models. These are the devices found during the field work at Morogoro.

S/n	Model	Photograph	Number	Percentage
	Incotex		38	47.5
S/n	**Model**	**Photograph**	**Number**	**Percentage**
	BRAVO		8	10
	RCH		12	15
	CUSTOM		13	16.25

	DATEC		9	11.25

Source: Field Data EFD Impact, 2013

Other EFD models in use although not found during the field work in Morogoro.

i) MPSSLD
ii) DFC
iii) HCT

This is according to research conducted MOROGORO**, IRINGA AND NJOMBE REGIONS; INCLUDING A SMALL SCALE OF DAR ES SALAAM REGION** Tanzania Chamber of Commerce Industry and Agriculture (TCCIA) Morogoro branch in **August, 2012.** A Study Commissioned to PAMOMA by TCCIA Morogoro and Undertaken By: - Ambakisye Mlungu- Registered Tax Consultant, with Dr. Joram Kilemile, Mr Zephaniah Mposo and Anthony Muchoki. *Financed By Best –Ac*

From the above table 4.1 it can be seen that, the most common EFD model in Morogoro is INCOTEX as it presents about 47.5% of the 80 devices observed from traders followed by CUSTOM 16.25%, RCH 15%, DATEC 11.25%, and BRAVO 10%.

The major reasons of such differences are presences of supplier's branch offices, simplicity on operating and prices of the devices.

For instant INCOTEX was a simplest device to operate and was supplied by PERGAMON a company with branch in Morogoro and they were selling at a price ranging between 1.5millions to 2millions.This is different from other models which were difficult to operate, sold at cost above 2 million and the suppliers do not have branches.

4.1.1.4 Other Observations

While interviewing TRA's officials it was observed that the sales sent by VAT traders after closure of the business were monitored by tax officers through software called Electronic Fiscal Device Management System (**EFDMS**).

For an officer to access the Z- report through EFDMS need to have a password to enable him enter the system. Here is where a big problem was observed, despite majority of TRA officials being familiar with it since early 2010 still some have passwords and some do not have and therefore not all who are monitoring the EFDMS. This becomes too difficult to enforce usage of EFD as it is a matter of few staffs who monitor daily sales regularly hence difficult to identify traders who are not using the EFD.

Table4.2 For further reference see the Table 4.2 below.

Name and Adress

of Taxpayer

EFD Serial

Report From from

Vr **Tin**

znu	dated	time	gross	dailytotalamou	vatlrat	vatlNett	vatlamount	vat2ra	vat2Nett	vat2amo	vat3
6341	-May-13	11:56	3,322,324,997.86	102,500.00	A-18.00	23,305.08	4,194.92	B-O.O	75,000.00		
6352	-May-13	16:36	3,322,672,897.86	347,900.00	A-18.00	99,915.25	17,984.75	B-O.O	230,000.00		
636	4-May-13	16:24	3,323,173,797.86	500,900.00	A-18.00	119,406.78	21,493.22	B-O.O	360,000.00		
637	5-May-13	16:25	3,323,344,297.86	170,500.00	A-18.00	71,610.17	12,889.83	B-O.O	86,000.00		
638	6-May-13	17:02	3,323,631,697.86	287,400.00	A-18.00	142,288.14	25,611.86	B-O.O	119,500.00		
639	7-May-13	16:21	3,323,790,997.86	159,300.00	A-18.00	69,745.76	12,554.24	B-O.O	77,000.00		
6409	-May-13	7:23	3,323,842,397.86	51,400.00	A-18.00	22,372.88	4,027.12	B-O.O	25,000.00		
641	9-May-13	16:49	3,324,166,847.86	324,450.00	A-18.00	143,389.83	25,810.17	B-O.O	155,250.00		
642	13-May-13	16:33	3,348,558,657.86	391,810.00	A-18.00	51,271.19	9,228.81	B-O.OO	253,000.00		
643	14-May-13	16:57	3,348,728,657.86	170,000.00	A-18.00	53,389.83	9,610.17	B-O.OO	107,000.00		
644	15-May-13	16: 18	3,348,943,657.86	215,000.00	A-18.00	27,118.64	22,881.36	B-O.OO	65,000.00		
645	16-May-13	16:28	3,349,123,757.86	180,100.00	A-18.00	67,033.90	12,066.10	B-O.OO	101,000.00		
646	18-May-13	16:40	3,349,306,957.86	183,200.00	A-18.00	90,000.00	16,200.00	B-O.OO	77,000.00		
647	19-May-13	16:33	3,349,561,617.86	254,660.00	A-18.00	62,203.39	11,196.61	B-O.OO	181,260.00		
648	20-May-13	16:40	3,349,642,617.86	81,000.00	A-18.00	47,457.63	8,542.37	B-O.OO	25,000.00		
649	21-May-13	16:29	3,350,015,617.86	373,000.00	A-18.00	10,169.49	37,830.51	B-O.OO	125,000.00		
650	22-May-13	15: 14	3,350,200,917.86	185,300.00	A-18.00	78,220.34	14,079.66	B-O.OO	93,000.00	0.00	
651	23-May-13	17:05	3,350,341,217.86	140,300.00	A-18.00	34,152.54	6,147.46	B-O.OO	100,000.00	0.00	
652	25-May-13	17:41	3,350,664,717.86	323,500.00	A-18.00	95,338.98	17,161.02	B-O.OO	211,000.00	0.00	
653	26-May-13	16:30	3,350,981,217.86	316,500.00	A-18.00	167,372.88	30,127.12	B-O.OO	119,000.00	0.00	
654	28-May-13	16:21	3,351,282,817.86	301,600.00	A-18.00	32,711.86	5,888.14	8-0.00	263,000.00	**0.00**	
655	29-May-13	16:49	3,351,588,317.86	305,500.00	A-18.00	130,508.47	23,491.53	B-O.OO	151,500.00		
656	31-May-13	17:41	3,419,525,867.86	67,937,550.00	18.00	23,082,076.27	4,154,773.73	B-O.OO	110,000.00		
				97,303,370.00		**25,021,059.30**	**4,503,790.70**		**3,109,510.00**		

4.1.2 Information obtained by way of questionnaires.

Table 4:3: Primary Data obtained from VAT traders.

REQUIREMENT	RESPONDENTS		PERCENTAGE
Time started using EFD**?**	Started end of 2010	64	80%
	Started at the beginning of 2011	16	20%
	Total	80	100%
Cost to acquire the device	less than 2,000,000 per EFD	68	85%
	Greater than 2,000,000 per EFD	12	15%
	Total	80	100%
Offsetting the initial cost of EFD	Initial costs were borne by government by setting off with V payable	80	100%
REQUIREMENT	**RESPONDENTS**		**PERCENTAGE**
Time taken to recover the initial c of EFD	More than 3 months	36	45%
	2 to 3month	28	35%
	1 month	16	20%
	Total	80	100
Helpfulness of EFD on reduc operation cost	Reduced cost	48	60%
	Increased cost	16	20%
	No change	12	15%
	Not certain	4	5%
	Total	80	100%
Challenges faced on using EFD	Little knowledge	64	80%
	Change of staff thus require anot training to new staffs	56	70%
	Maintenance cost	72	90%
	Time of recovering malfunction si some of EFD suppliers do not h branches	80	100%
	Bleaching of printing papers.	75	93.75%
	Network problem	32	40%
	Printing errors	68	85%
Effect of challenges on busin prosperity	Did not affect business prosperity	72	90%
	Affected business	8	10%
	Total	80	
Malfunction frequency	Less than 6 times a year	76	95%

	More than 6times a year.	4	5%
	Total	80	100%
Time taken to report malfunction	Within 24 hours	24	30%
	After 24 hours	56	70%
	Total	80	100%
REQUIREMENT	**RESPONDENTS**		**PERCENTAGE**
Time taken to recover E Malfunction	Within 48 hours	6	7.5%
	After 48 hours	74	92.5%
	Total	80	100%
Offences	Served offence	10	12.5%
	Never served an offence	50	62.5%
	No response	20	25%
	Total	80	100%
Option of using EFD	Opt to use	40	50%
	Opt not to use	21	26.25%
	Dilemma	19	23.75%
	Total	80	100%
Opinion on the use of EFD	Maintenance of EFD be under TRA	80	100%
	TRA should employ technician to t charge of EFD's Malfunctions.	64	80%
	Education on the EFD regulati especially on the user and suppli obligations	40	50%
	Cost of acquiring the EFD is reduced.	56	70%
	TRA has to purchase the devices a then distribute to users.	24	30%

Source: Field Data EFD Impact, 2013

4.1.2.1 Discussion of the Findings

4.1.2.1.1 Time started using EFD:

From the above table 4.3 it can be observed that majority of the VAT traders sampled and visited for the sake of this research started using Electronic Fiscal Device (EFD) at the end of the year 2010 which is about 80%. While 20% of the sampled traders started using EFD at the beginning of 2011. This was asked to VAT traders in order to let it be open to the general public that most of the VAT traders acquired the devices as early as possible despite

of the high initial cost of the devices. Also this question was asked in order to check the eligibility of a trader to be sampled for the research purpose. Note that in order for a trader to be sampled for the research one was supposed to be VAT trader since 2008 and using EFD machine since 2010 or 2011. Bearing in mind that the general purpose of the research was to measure the impact of EFD on VAT collections in Tanzania of which VAT collections for the financial year 2008/2009-2009/2010 were measured against collections for the financial years 2010/2011-2011/2012

4.1.2.1.2 Cost to acquire the device

Out of 80 traders visited during the research 68 of them which is 85% purchased the devices at a price less than two million while 12 traders equivalent to 15% purchased at a price greater than two millions. Most of traders asked this question were in view that such cost of less or greater than two million was too high considering that their businesses are making little profit to pay at per. After all other traders had more than one outlet of which they had to acquire as much as possible depending the number of outlets. Although not specified on the questionnaire, no any device was sold at a price less than one million and in fact the researcher was very unconscious that all devices were sold above one million. Generally the aim here was to prove genuinely the cost applied to acquire the EFD.

4.1.2.1.3 Offsetting the initial cost of EFD

According to Regulation 28 read with first schedule of VAT (EFD Regulations) 2010 the cost of initial purchase of EFD is supposed to be borne by the government by offsetting the output tax during submission of VAT returns one month following the month of purchase under the normal refund system. During the interview with VAT traders all traders admitted to have been refunded their cost to acquire the devices. This was testing compliance of the government on the laws and regulations administered by itself as well means of motivating traders towards voluntary tax compliance.

4.1.2.1.4 Time taken to recover the initial cost of EFD

The question was purposely asked

First: To satisfy our self if the initial cost of acquiring the EFD was borne by the government as per VAT (EFD Regulations) 2010 requirements.

Second: To determine the financial strength/capability of the traders as well as business performance of sampled VAT traders.
From the table above you can see only 16 traders' equivalent to 20% of the traders visited their businesses' output taxes were capable of offsetting the initial cost within one accounting period i.e. one month. While 28 of them which was 35% were able to offset the cost within two to three accounting periods. On the other hand 36 traders out of 80 visited their business's output taxes were able to offset such cost of initial purchases in more than three accounting periods.

Simple implication was that, those traders who were capable of offsetting initial cost within one month were wealthier than those above two months. Also the expectation of TRA was for such cost to be cleared as early as possible.

4.1.2.1.5 Helpfulness of EFD on reducing operation cost

Of the 80 VAT traders asked this question 48 of them which was equivalent to 60 percent were on the view that EFD have reduced their operation cost. Others went further by saying that, prior to purchase of the devices they had to hire a person to sum all the daily sales from the receipt books and reconcile the cash in till. But currently they just print x-report any time they need or z-report when closing business.

On the same case 16 traders equal to 20 percent claimed for the increase of operating cost especially on maintenance. The same applied 12 traders which were 15 percent noticed no change on operation cost since they acquired EFD.
While 4 of them equal to 5% were not certain as to whether EFD have increased operation cost or not.

With this explanation you can generally conclude that EFD have reduced operation cost of business as it was only 20% who claimed to have increased operation cost while 80 percent were not negatively affected by the introduction of Electronic Fiscal Devices. However this finding has answered the second specific objective which was to determine the cost effectiveness of EFD.

4.1.2.1.6 Challenges faced by VAT traders on using EFD

One of the five specific objectives of this research was to determine the problems and challenges faced by VAT traders and TRA on administering EFD. This part gives findings of one part i.e. challenges faced by VAT traders on using EFD. Most frequently and repeatedly appeared to traders included little knowledge which presented 80 percent of the traders interviewed, Also change of staff something which required another training to new staff represented 70%.

Another challenge was maintenance cost of which 72 traders representing 90% claimed to be a problem.

Time to recover malfunction seemed to be a critical problem to all traders since it represent 100% of the traders interviewed. On this challenges majority said it was caused by lack of suppliers branches in up countries thus they had to consign the devices to Dar es Salaam where suppliers are found.

Bleaching of printed papers was another challenge addressed by traders, you can see from above that 75out of 80 VAT traders interviewed equivalent to 93.75 percent faced this challenge. To them it was very impossible to claim for input taxes since figures and other descriptions were not clearly visible therefore TRA official were rejecting them.

Network problem was another challenge determined during the research, when there was a network problem traders were unable to send z-report. Normally if z report is not sent within three days the devices give error and therefore cannot function. This was not that much serious since only 32 traders out of 80 equivalent to 40% claimed to be a challenge.

Printing error was pointed out by 68 traders which were about 85 percent of the total sample. To them was a big challenge when such error could not be noticed and traced to provide evidence on the error since it can be considered as sale. Usually the TRA requires to be notified on occurrence of an error attached with a receipt which was wrongly printed. According to TRA this is demanded in order to avoid others to claim as input tax.

4.1.2.1.7 Effect of challenges on business prosperity

Despite of the challenges analysed above still most of the trader's businesses were not affected. As you can see 72 traders businesses were not affected by the challenges above, while it was only 8 traders who claimed on their business prosperity being affected. Note that if there could be any change on their business prosperity especially on the negative side there could be as well a drop on VAT collection as will be seen while analysing the secondary data.

4.1.2.1.8 Malfunction frequency.

This was asked to interviewees in order to determine if the Devices are genuine and suitable for use in our climate. Although frequency of malfunction can be contributed by poor handling of the devices by the traders themselves but at least it can tell to some extent how genuine they are.

During the research 76 traders equivalent to 95% their devices got malfunction in less than six times a year. This implies that in every two months a device gets malfunction once. Under normal circumstance they say frequency of malfunction is not a big issue, rather time taken to recovery and the cost associated.

Other 6 traders were claiming that since they acquired their devices they have been developing malfunction almost more than six times a year.

4.1.2.1.9 Time taken to report malfunction

This was asked to traders to answer the fourth specific objective which was to find out the awareness of traders on EFD regulations and their legal obligations to the use of Electronic Fiscal Device. Majority of traders which was about 70% failed to report malfunction within 24 hours a required under regulation 10(9) of VAT (EFD regulations)2010. While 30% of traders reported the matters as per regulations requirement. Some of them were not aware of the legal requirements, some negligence; others failed to report on time when malfunctions occur in weekends while TRA offices are closed.

4.1.2.1.10 Time taken to recover Malfunctions

This part/ question aimed at checking the compliance of EFD suppliers over the EFD regulations. Regulation 7 of the VAT (EFD Regulations) 2010 states the obligations of suppliers and one among obligation is to recover the malfunctions within 48 hours from the moment is reported to them by users. This was purposely to check the compliance although it was not the major concern of this research. Note that the research has left a gape for other researchers to find out the compliance of EFD suppliers and the awareness of the general public over the use of EFDs.

While holding discussion with VAT traders it was discovered only six trader's machines equivalent to 7.5 percent were recovered on time while 74 or 92.5 percent were recovered after recommended time i.e. 48 hours. On further discussion they reported that this was mainly due to absence of branches in upcountry of which they had to send the devices to Dar es Salaam for maintenance.

Generally this regulation was not complied and thus TRA need to see how this can be effectively complied.

4.1.2.1.11 Offences

This question aimed to see by how much traders are complying with the general VAT (EFD regulations) 2010. Note that the higher the compliance the higher the vat collections. Also for the sake of this questionnaire the higher the number of offences raised the lower the compliance. Also it is not necessary that lower number of offences implies high compliance, it may be also caused by weak management of TRA on using legal tools. On field only 10 traders or 12.5 percent were served with offence for failure to comply with different EFD regulations. On the other hand 50 of them or 62.5 percent said they have never served with offence for any case while 20 of them or 25 percent did not respond to this question as it was personal concern to them. But generally as per these findings most of VAT traders were not served with offence with reasons stated above.

4.1.2.1.12 Option of using the EFD

This was asked in order see the willingness of traders on using the EFD if it was not for the sake of law. On the field it was seen that 50 percent of traders asked these question were willing to use the EFD with reasons explained while discussing the helpfulness of EFD on reducing cost. With impotencies mentioned still some traders were on the view of not using EFD due forced capital, maintenance cost and the disturbances when there are malfunctions. On this 26.25% traders were on the view of not using EFD. Other 23.75% or 19 trader asked this question were on dilemma as to whether to use it or not. This can be concluded that traders are willing to use the EFD especially if all the challenges addressed can be changed to opportunities.

4.1.2.1.13 Opinion on the use of EFD

During interview VAT traders were asked their opinion in general corning EFD. This aimed at gathering opinions of core stakeholder on how to improve the use of EFD.

Due to this the following the opinions of most VAT traders. Maintenance of EFD be under TRA,TRA should employ technician to take charge of EFD's Malfunction Education on the EFD regulations especially on the user and suppliers obligations costof acquiring the EFD is reduced and TRA has to purchase the devices and then distribute to users. Also this provides an indication that traders are willing to use the EFD thus why they are providing positive advice for the sake of improving the general use of EFD.

Table 4.4: Primary data obtained from TRA official.

REQUIREMENT	RESPONDANTS		PERCENTAGE
Meaning of EFD	Correct meaning	22	91.67%
	Wrong meaning	2	8.33%
	Total	24	100%
1st Time to hear about EFD	2010	21	87.5%
	After 2010	3	12.5%
	Total	24	100%
Problems on administering EF	Network	15	62.5%
	Insufficient technical mechanical knowledge	23	95.83%
	Non issuance of receipts	12	50%
	Wide range of performa Measure	2	8.33%
	Little support of general pul on demanding receipts	14	58.33%
Reasons for non-compliance	Low level of voluntary compliance	17	62.96%
	Lack of knowledge to traders	15	55.56%
	Negligence	10	37%
	Lack of knowledge to the gene public specifically on importance of demand receipts when making purchas	20	74%
REQUIREMENT	**RESPONDANTS**		**PERCENTAGE**
Appropriateness for TRA introduce EFD	YES it is appropriate	15	62.5%
	Not appropriate	9	37.5%
Strategy to improve usage administration of EFD	Sensitization of general pul on the importance of dema receipts	20	74%
	Increase education to traders the importance of voluntary compliance.	15	55.56
	Administration of EFD should every one's duty including pol and other organizations	20	74%

Source: Field Data EFD Impact, 2013

4.1.2.2 Discussions on Primary Data obtained from TRA officials

4.1.2.2.1 Meaning of EFD

This research also was intending to know how knowledgeable the TRA officials are over EFD. A total of 24 officials were involved of which 22 of them stated correctly the meaning of EFD equal to 91.67 percent while 2 of them equal to 8.33 percent stated wrongly from literature and reality. Note that Electronic Fiscal Device is a machine designed for use in

business for efficient management controls in areas of sale analysis and stock control system which conforms to the requirements specified in VAT Act (EFD Regulations) 2010 and dully registered under regulation five of these Regulations. However this gave a startup image on the awareness of EFD to TRA officials.

4.1.2.2.2 1st Time to hear about EFD

Majority of TRA officials heard about EFD for the first in 2010 which represent 21 traders which is about 87.5%. 3 officials of the 24 heard about it after year 2010 which was about 12.5 percent. EFD was introduced in July 2010 thus why this question cited this year in order to know for how long did they know the EFD.

Also the 12.5% represented new TRA staffs who were recently employed. Here it can be concluded that TRA officials knew the existence of EFD more than three years ago.

4.1.2.2.3 Problems on administering EFD

Right from the beginning of this researches it major concern was to determine the impact of EFD on VAT collections in Tanzania and determine the challenges there on to the users of EFD and the TRA as well; the challenges faced by VAT traders have been discussed on the part of traders. To make this research complete TRA officials stated some challenges of which some were similar to those of traders and others were for TRA alone which in total made the EFD challenges.

Such challenges included;

Network of which 15 officials stated as a challenge, insufficient technical & mechanical knowledge to TRA officers on which 23 equal to 95.83 percent of them sated as one among challenges facing the administration of EFD. Note that almost all officers asked agreed that what they knew over EFD were the EFD regulations, X and Z report generations. Thus they completely are lagging behind technical and mechanical issues of EFD. Other challenges addressed by them included non-issuance of receipts by VAT traders, on this 50 percent agreed with this as a challenge since it leads to low collections of VAT. Wide range of performance Measure was another challenge to them, this was too internal. To them lack of specific measure of performance was a challenge. For instance one may decide to measure performance by checking issuance of receipts, others by checking the VAT collections,

others the increase of sales, others recovery of EFD on time e.tc. This was much discouraging the officers as it never happened to be praised for the good performance of EFD. But carried only 8.33 percent of the officials asked. Little support of general public on demanding a receipt was another challenge, according to TRA officials was that they are very few in number to insure every trader is issuing receipts. They are in view that the general public is require to provide maximum support to TRA by providing information of those traders selling or issuing services without proving receipts. On this scenario 14 officers state this which was about 58.33 percent of the total sample.

4.1.2.2.4 Reasons for non-compliance

This question was asked purposely to know if the TRA officials are aware of the traders noncompliance and the reasons there on. It should be noted that the lower the level of compliance the lower the VAT collections. During research the TRA officials seemed to be aware on trader's noncompliance and thus stated some of the reasons for such noncompliance.

Such reasons included lower level of voluntary tax compliance, About 17 official equivalent to 62.96 percent were on this view. According to officials tax is compulsory deductions or levy; however it is a pinch when they pay tax as it reduces ones income. Lack of knowledge to traders on tax matters was another reason stated by officers for noncompliance, here about 55.56 percent agreed with this. Some of officials went further by saying that noncompliance was due to negligence about 10 officers or 37% pointed out as a reason there on. Lack of knowledge to the general public specifically on the importance of demanding receipts when making purchases

On these 20 officers or 74 percent stated the same specifying that, this was caused by the insufficient staffs thus requiring support from the general public by just demanding receipts.

4.1.2.2.5 Appropriateness for TRA to introduce EFD

During this research again officers were asked if introduction of EFD was for the appropriate time. Of the 24 officials interviewed 15 of them or 62.5 percent thought it was appropriate pointing out that the world now is integrated with software thus traders need

too. But others officials who presented about 37.5 percent of the total sample had different opinion that it was not proper for the EFD to be introduced.
Their opinions were supported by the challenges of EFD pointed out earlier.

4.1.2.2.6 Strategy to improve usage & administration of EFD

Despite the challenges addressed by the VAT traders and TRA officials still TRA officers as part of stakeholders think there is something to be done to improve the use of EFD in steady of throwing away such technological strategy. To improve these TRA officers suggested some strategy to improve the performance of EFD AND VAT collections at large. These strategies included the following,Sensitization of general public on the importance of demand receipts of which 74% suggested this, Increase education to traders on the importance of voluntary tax compliance, here about 55.56 percent of officers were on this view. Administration of EFD should be every one's duty including police and other organizations.

Note that TRA has insufficient number of staffs like other organizations; however it is very difficult to monitor all activities of traders at a time. Thus why it is thought to involve other organizations to insure maximum compliance.

4.2 Secondary Data

4.2.1 VAT Collection Trends

4.2.1.1 Gross VAT Collection Trends

Table 4.5: VAT per sampled trader

Trader	2008/2009	2008/2009	2009/2010	2010/2011	2011/2012
	20%	18%			
1	93,605,356	84,244,820	122,546,817	62,576,273	78,656,338
2			18,724,256	12,978,455	15,186,306
3	3,027,238	2,724,514		282,590	1,568,552
4	316,973	285,275	2,753,634	2,049,747	1,505,868
5	16,580,855	14,922,769	22,470,450	21,904,351	13,897,950
6	1,957,105	1,761,394	9,021,200	10,925,014	6,959,883
7					1,267,715
8	192,700	173,430	6,175,516	25,091,139	61,245,374

9	2,799,533	2,519,579	19,925,902	11,811,707	14,485,514
10	58,820,338	52,938,304	134,656,198	177,717,966	178,588,959
11			0		343,221
12	2,205,781	1,985,202	970,641	681,410	2,245,413
13	15,688,576	14,119,718	31,005,518	5,760,989	7,247,578
14	2,822,117	2,539,905	4,753,557	4,803,970	10,463,262
15					4,630,937
16			224,784	702,027	436,838
17	13,425,650	12,083,085	26,046,849	17,119,703	11,819,874
18				2,631,126	3,717,383
19	1,876,363	1,688,726	6,888,342	5,077,393	6,567,366
20	7,699,865	6,929,878	4,806,625	7,862,974	7,618,598
21			11,120,223	9,886,535	8,012,484
22	13,492,130	12,142,917	20,946,936	21,425,439	20,561,109
24	84,219	75,797	1,330,170	1,638,050	
25	5,851,214	5,266,092	8,840,408	5,809,094	2,223,895
26	9,605,680	8,645,112	14,342,723	18,471,697	22,001,927
27	3,196,147	2,876,532	3,671,103	2,891,222	3,516,376
28				16,363,934	22,250,031
29	6,531,719	5,878,547	6,426,639	5,034,087	7,259,204
30	5,140,468	4,626,421	11,084,664	15,952,845	13,923,129
31	3,000,000	27,000,000	8,595,639	22,758,891	19,867,135
32				2,787,404	3,695,830
33				9,527,972	9,895,829
34	61,701,579	55,531,421	55,124,672	39,943,746	57,770,575
35	4,986,275	4,487,647	4,596,342	3,911,705	5,802,071
36	60,869,818	54,782,836	73,190,873	86,542,586	64,603,895
37	97,669,360	87,902,424	90,935,466	108,095,574	91,946,769
38	14,242,160	12,817,944	200,123,276	572,607	363,518,057
39	7,743,452	6,969,106	11,636,682	12,925,589	12,039,101
40	318,844	286,959	1,111,619	273,720	2,130,950
41	1,730,433	1,557,389	3,808,796	853,680	457,880
42	11,202,239	10,082,015	17,427,577	16,541,300	19,430,208
43	2,484,568	2,236,111	2,424,551	1,904,799	2,217,638
44	2,778,278	2,500,450	384,121	869,505	779,391

45	5,784,497	5,206,047	11,328,740	7,392,245	7,194,369
46	702,789	632,510	2,232,374	3,204,602	2,543,455
47	2,008,776	1,807,898	3,990,600	2,181,068	1,203,036
48				46,935,650	29,440,380
49	956,284	860,655	4,101,675	985,679	2,546,499
50	1,535,729	1,382,156	6,658,965	9,397,678	5,610,061
51				11,397,678	10,634,530
52	2,377,130	2,139,417	3,326,240	2,917,214	1,248,669
53	764,060	687,654	3,476,108	3,084,693	3,247,148
54	93,601,246	84,241,121	62,677,940	129,907,904	158,913,493
55	150,514,580	135,463,122	154,485,331	157,384,775	147,758,213
56	1,025,444	922,899	18,514,737	5,945,376	10,093,344
57	3,661,323	3,295,190	3,273,627	2,327,550	2,673,883
58	206,889,625	186,200,662	35,708,611	111,032,318	146,232,686
59	19,618,097	17,656,287	26,530,077	47,521,140	20,225,492
60	47,268,381	42,541,542	91,483,555	181,532,579	29,701,092
61	31,229,484	28,106,535	35,294,512	123,971,076	84,667,718
62	3,609,546	3,248,591	2,815,603	2,796,223	1,349,762
63	2,648,337	2,383,503	4,820,037	2,058,879	1,330,620
64	117,527,666	105,774,899	110,087,408	108,441,899	135,802,952
65	3,285,666	2,957,099	5,823,374	5,260,020	7,615,853
66	3,451,762	3,106,586	4,024,124	2,974,798	1,345,767
67	2,423,357	2,181,021	5,134,210	3,529,052	5,798,853
68	7,024,873	6,322,385	3,888,525	16,815,115	13,312,001
69	2,264,393	2,037,953	8,088,985	11,303,500	9,201,652
70	850,000	765,000		574,505	4,630,699
71	1,943,500	1,749,150	9,332,039	15,282,562	15,618,655
72	6,460,028	5,814,025	7,669,653	3,370,509	8,057,006
73	1,599,608	1,439,647	3,418,146	2,400,681	1,026,958
74	6,028,061	5,425,255	8,851,050	15,729,395	17,669,316
75	1,058,208	952,387	10,477,094	5,814,247	11,237,290
76	24,236,846	21,813,161	24,280,183	18,488,873	13,762,421
77	3,691,578	3,322,420	2,794,735	2,630,387	1,145,344
78	878,153	790,337		1,324,308	1,600,388
79	3,370,245	3,033,220	6,405,254	8,319,354	5,197,371
80	29,450,339	26,505,305	24,122,788	37,112,628	37,070,745
TOTAL	**1,323,611,647**	**1,215,550,482**	**1,664,298,543**	**1,887,319,250**	**2,139,721,415**

Source: Field Data EFD Impact, 2013

4.2.1.2 Total Collection Trend

Gross VAT collections trends consider the collection of four consecutive financial years without considering inflations. Thus the collections of VAT for the 80 sampled traders are as follows

Table 4:6: Total gross VAT collections

Financial year	Gross VAT collections in Tshs.
2008/2009*	**1,323,611,647**
2008/2009	**1,215,550,482**
2009/2010	**1,664,298,543**
2010/2011	**1,887,319,250**
2011/2012	**2,139,721,415**

Source: Field Data EFD impact, 2013

NB: * This implies VAT amount at the rate of 20 per centum, note that it was stated early that 18% VAT rate will be applied to bring uniformity and unbiased comparisons and conclusion as well.

4.2.1.3 Net VAT Collection Trends

Table 4:7: Total net VAT collections

Financial Year	Gross VAT	Inflation Rate %	Net VAT
2008/2009*	**1,323,611,647**	11.69	1,168,881,445.54
2008/2009	**1,215,550,482**	11.69	1,073,452,630
2009/2010	**1,664,298,543**	10.81	1,484,387,870
2010/2011	**1,887,319,250**	6.68	1,761,246,324
2011/2012	**2,139,721,415**	17.22	1,771,261,388

Source: Field Data EFD Impact, 2013

Source of inflation rate: www.tradingeconomics.com

The National Bureau of Statistics (NBS)

Net VAT was computed by taking Gross VAT- (Gross vat*Inflation rate)

4.3 Analysis of the Findings

4.3.1 Importance of the EFD to VAT traders

It helps to know current and daily sales easily through X reports and Z reports print outs respectively. X report is a summary that shows the amount of sale from the moment of opening the office to the time when such report is demanded. While Z report is a summary that shows the total sales of the day which is sent to TRA when closing the sales of the day.

i) Helps to know daily and monthly sales easily.

The Electronic fiscal Device is capable of producing a summary of daily sales weekly sales, monthly and annual sales. The tax payer is taught and given a manual on how to generate such summaries by the EFD suppliers. It is y just pressing certain characters on the EFD keyboard and then the summary is printed. It is by this way the VAT traders and other users of EFD are feel too relieved from the pain of summing up such sales. Note that it is time consuming to add and subtract manually. However the traders are able to know their sales easily any time they need certain sales.

ii) Keeps record and simplify work.

Tax laws especial sections 80A of income tax Act number 11 of 2004 require a person to keep or maintain records for five years for further reference. However the Electronic Fiscal device is capable of maintaining information for five years without being erased. For this case traders are complying with other tax laws automatically. Also luck enough these information can be retrieved whenever needed by users. Note that for audit purposes, it makes easier for traders themselves to know their sales of the previous years easily.

iii) **Consume a very short time to make calculations**.

Electronic fiscal device is capable of consolidating several information within a short time. Thus in steady of a taxpayer spending a lot of time with a pen and a calculator, he simply command the devices for the inputs required.

iv) **Keeps daily records, and minimized costs for printing receipts**.

As discussed early that the machine is able to store information for five years then the total cost of printing receipt books is automatically reduced. Note that, the cost of printing receipt book is far higher than buying thermo papers. Also the durability of the information stored in the EFD memory is high than those stored in the paper receipt book. However it is an advantage for VAT traders to use these devices for the sake of proper record keeping

v) Helps in stock control

The electronic fiscal devices are capable of storing information relating to purchases and sales. Here the trader enters the quantity of the items purchased and the items sold in the EFD systems. Once the purchase is made the stock is added by punching in the EFD all the purchase made and reduced whenever any sale is made by punching all the items sold during a particular time. At the end of the day the trader may demand stock summary by pressing certain number on the EFD keyboard which will give the amount of stock remaining. But all these require clear instructions from the suppliers of the EFD, thus why they need to be in touch to each other. This is a simplest way to control stock ever, but it requires a person who properly complies with EFD regulations, especially on issuing fiscal receipt on every sale made and purchase made.

vi) Reduces accountants' costs.

According to ethics of accountants, they are required to charge fees to their clients depending among other factors the bulkiness of the work itself. Since the EFD simplifies work on determining the stock, amount of sales and purchases daily, weekly, monthly and even annual then accountants have little work to do. Therefore they will always bid lower considering EFD having done other activities.

4.3.1.1 Challenges of EFD to VAT traders

i) Little knowledge

Majority of EFD user and operators are either standard seven or form four leavers and very rare form six and graduates. This was found on the field although the figure was not quantified to certainty. Since the devices are technical associated with legal back up

majority do fail to use it correctly and exploit all the EFD packages. This happened to be a big challenge to EFD users

ii) Change of staff thus require straining to new staffs

Labour turnover is an issue here; this is when competent EFD users resigns or find somewhere else to work it cost time and sometimes failing to meet customers' ratifications for a new worker to be trained.

iii) Maintenance cost

When a device gets malfunction it is upon the trader to bear the cost of maintenance. This has risen so many and unanswered questions to TRA and the government as to why they incur maintenance cost while the EFDs are the TRA belongings. Some of traders have entered an agreement with suppliers for the maintenance cost by paying certain amount of money per year. To them it reduces their profits unnecessary.

iv) **Time of recovering malfunction since some of EFD suppliers do not have branches**

Of the six mentioned suppliers only two suppliers had branches as per EFD regulations options. Regulation 7.4 of the VAT-EFD regulations, 2010; state that the "approved supplier **may**, for convenience purposes, at his own or upon the request of the Commissioner, open branch offices in various regions." This regulation gives a loophole for the suppliers to fail to open branches upcountry. This lead to failure of suppliers to recover malfunction within scheduled time. It a is trouble to users as it gives them extra work since they have to punch all the manual recorded sales into the device.

v) **Bleaching of printed papers**

The regulation recommend thermo paper to be used as printing papers as they last longer. But very unfortunately the papers used are not genuine thus becoming faint within short time. Is a big challenge to them during audit as they fail to claim as purchases since the print out figures are not visible thus ending up paying unreasonable tax.

(vi) Network problem

Network is a headache to most traders as they sometimes double send Z-report hence giving huge sales. Also when such network persists in more than two days it gives error which will require a technician to rectified the problem. Not that if the EFD wont sent z report in more than the said days it fails to operate until it is sent.

(vii) Printing errors

Due to little knowledge, human and technical error sometimes traders do print large amount of sale than the amount received. If it won't be detected early it becomes a problem to them as it will be counted as sales made by TRA. The VAT Act, 1997 has regulations of 2000 which give procedures for correction of errors but upon submission of a receipt with errors.

4.3.2 TRA's Officials Knowledge on EFD

4.3.2.1 Usefulness of EFD to TRA officials

i) Simplifies audit and verifications of VAT returns. Officers admitted that it is now simple for them to sum up all sales for a particular month or any period under audit/examination. Also it is simple considering they can obtain the remaining stock of a tax payer easily. While discussing the importance of EFD to VAT traders in part 4.3.1, it was seen that EFD helps to control stock; the same is used by the TRA officers but after demanding from the customer.

ii) Also EFD through EFDMS enables the officers to easily determine the VAT amounts, exempts, special reliefs' cumulative sales and the sales chargeable to VAT. If you check table 4.1 Z report sample it shows all the stated items which are automatically shown on it. In steady of an officer to ask the taxpayer the amount of exempts, output taxes, special reliefs, zero rated or amount exported he will simply be confirming.

iii) Reduces complains of customers on assessments hence reduces objections.

iv) Also despite of the above tax reasons stated others agreed that, EFD is a Morden technology, which fits which this fast moving world of science and technology and a world of so many transactions.

4.3.2.2 Challenges of EFD to TRA

i) **Network**:

Sometimes although not frequent the system faces network problem thus becoming difficult to make reconciliation when VAT returns are submitted.

ii) **Insufficient technical & mechanical knowledge:**

Almost all TRA officials have basic knowledge over the EFD i.e. knowledge of enquiring x report and z reports since EFD manual is used. But they totally fail to find final solutions when technical or mechanical problem occur.

iii) **Non issuance of receipts:**

Some of traders due to involuntary tax compliance are too reluctant on issuing receipts. This is a headache to TRA officials as it becomes meaningless to have EFD while not issuing receipts

iv) Wide range of performance Measure:

Some of officers fill this is a threat to them since any supervisor can decide to measure the EFD impact just looking issuance of receipts, others may decide to check the increase or decrease of sales or increase or decrease of VAT payments**.**

v) **Little support of the general public on demanding receipts:**

Although this was left as a gap of this research but the officers claimed of getting little support from general public as they don't demand receipts when they make purchase.

4.4 Analysis of Secondary Data

Table 4:8: EFD impact before considering inflation

Financial year	Gross vat collections in Tshs.	% increase	Marginal change
2008/2009*	**1,323,611,647**		
2008/2009	**1,215,550,482**	0%	0%
2009/2010	**1,664,298,543**	37%	37%
2010/2011	**1,887,319,250**	55%	18%
2011/2012	**2,139,721,415**	76%	21%

Source: Field Data EFD Impact, 2013

Table 4:9: EFD impact after considering inflation

Financial ye	Gross VAT	Inflation rate %	Net VAT	% increas	Marginal change
2008/2009*	**1,323,611,647.08**	11	1,168,881,445.54		
2008/2009	**1,215,550,482.37**	11	1,073,452,630.98	0%	
2009/2010	**1,664,298,543.42**	10	1,484,387,870.88	38%	38%
2010/2011	**1,887,319,250.71**	6	1,761,246,324.76	64%	26%
2011/2012	**2,139,721,415.86**	17	1,771,261,388.05	65%	1%

Source: Field Data EFD Impact, 2013

Table 4:10: EFD impact before and after introduction of EFD

Financial year	Gross VAT	%chang	Net VAT	%chang
2008-2010	2,879,849,025.79		2,557,840,501	
2010-2012	4,027,040,666.57	40%	3,532,507,712	38%

Source: Field Data EFD Impact, 2013

From table 4.8 it shows an increase of VAT by 37% in financial year 2009/2010 and by 55% in financial year 2010/2011 while by 76% in the financial year 2011/2012.

To bring about unbiased analysis net figures were determined by taking into account rates of inflations of which also there were some increase of VAT by 38% in financial year 2009/2010, by 64% in financial year 2010/2011 and by 65% in financial year 2011/2012 as it appears in table 4.9

Note: Of all the computations done, 2008/2009 financial year was considered as base year.

Also marginal percentage change of VAT determined in which each previous year was considered as base year of the preceding financial year. Thus in 2009/2010 there was an increase of 37%, in 2010/2011 by 18% and 21% for the financial year 2011/2012. **This was before consideration of inflation.**

After inflation there were some marginal increase of VAT by 38% in 2009/2010, 26% in 2010/2011 and 1% in 2011/2012.The major significance of this research was to determine whether there is an increase of VAT collections since the introduction of Electronic fiscal devices (EFD) in 2010. By taking cumulative collections of VAT for the financial years 2008/2009 and 2009/2010 before introduction of EFDvs. 2010/2011 and 2011/2012 after introduction of EFD there have been an increase of 40% before considering inflation and 38% after inflation.

Other Possible Reasons for the increase of VAT Collections

i) Increase of middle class income earners thus increases of consumptions and hence general increase of sales as well as VAT.

ii) General increase of businesses which have large output taxes with low input taxes thus ending up paying more VAT. Such business includes Hotels, lodge, conferences and guest houses which have rapidly increased in Morogoro.

iii) Increase in populations due to increase of colleges such as Muslim university, Jordan University Saint Augustine University Ifakara Branch, increase of admission for Sokoine University of Agriculture and others may be the reasons for the increase of VAT collections.

iv) Other economic factors such as economic growth, risk management in which majority of business people have decided to use competent tax consultants who educate them apart from preparing accounts something which might have increase compliance.

The stated above reasons are non-researched but for the sake of this research they have been stated to provide a room for other researchers a gape of knowledge and a starting point. Also to enable the researcher himself to avoid absolute conclusion that it is the EFD that has increased VAT collections.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This study aimed at finding out if there is any increase or decrease on VAT collections since the introduction of EFD in 2010. Also to address different challenges faced by both VAT traders and TRA officials while using the EFD and administering it respectively. Due to data of VAT collections obtained it has revealed a large increase of net VAT from Tshs 2,557,840,501.86 in financial year 2008 – 2010 to Tshs 3,532,507,712.81 in financial year 2010-2012 for the 80 sampled traders. This is equivalent to an increase of 38 percentages.

Also this study has tried although not stated on the proposal to list some other factors which may have contributed to an increase of VAT collections such as increase of population, increase of middle class earners, increase of businesses with high output taxes than input taxes such as hotels, dealers of forest products and others and other economic factors.

Generally the EFD has proved a positive impact by increasing the VAT collections in two years since introduction of EFD.

Despite such huge increase of VAT this research discovered a lot of challenges facing VAT traders and TRA official which in fact need to be rectified for further increase of VAT collections.

The most challenges facing the adoption of EFD included the availability of GPS network in most parts of the country. Currently, the main providers in most parts so far are Airtel Tanzania LTD and Vodacom Tanzania LTD. This really has resulted in reports of communication inefficiencies experienced among many EFD users in the areas where this study was conducted.

Whereas these two companies are not distributed all over the country, the VAT registered businesses are spread in various areas of this country including other remote areas where the network is not available. Moreover, even where the networks are available, the network problems are still experienced at large due to data traffic jams. Bear in mind that EFD phase I targeted twenty thousand VAT traders in the country. Users of EFDs failing to send Z-

Reports on daily basis by negligence and network fault, is another problem affecting the smooth operation of EFDs.

The design of Fiscal devices which uses fiscal memory requires that the Z-Report, which is the actual data stored in fiscal memory of fiscal device; to be sent on daily basis to TRA main saver.

High accumulation of unsent Z- report in the fiscal memory of the device results to malfunctions. In this way it is important for the network to be efficient to allow EFD users to clear out the fiscal memory by sending the data to TRA daily.

Proper and adequate training using a language most understood by many like Kiswahili is another challenge which needs to be addressed. The study revealed that many of the problems experienced by EFD users emanated from inadequate and improper training the users received from the suppliers. As statistics indicated many users complained that the training they received did not give them a sound knowledge in effectively using the machines. This can be rectified through on business training.

Another challenge which is now a problem is the maintenance cost of the devices when they get malfunctions. This is in hand with time taken to recover the EFD malfunctions since most of suppliers do not have branches in upcountry of which traders are supposed to send the machines to suppliers located in Dar es Salaam at their own cost something which is very unfair.

Note that regulation 7.4 of VAT, (EFD regulations) 2010 gives an option to EFD suppliers to open branches in upcountry of which most of them have opted not to open branches since it is not mandated. **This states that the "approved supplier may, for convenience purposes, at his own or upon the request of the Commissioner, open branch offices in various regions."** This regulation gives a loophole for the suppliers to fail to open branches upcountry. This has been the source of all troubles as traders have to send the EFDs all long to Dar es Salaam for maintenance. This has been badly affecting the smooth operation of EFDs.

Also during this field work most traders confessed that TRA could burst on VAT collections if much enforcement on issuance of receipts could be addressed to Dar es Salaam commonly known as the DUBAI of East Africa.

Bear in mind that Morogoro traders are on view that they are not issuing receipts and hence under declarations of sales since they are not issued with receipts when they make purchases in Dar es Salaam. Some of them said they are not given receipts since they are making credit purchases, so they do so at least to get something to purchase and sale. Also others are not given receipt just because their suppliers are monopoly on the market due to genuine products or services they offer.

Cost of EFD initial purchase is another challenge to traders since they are forced to withdraw capital to finance the purchase of it. Most traders in Morogoro are running businesses on credit and thus they don't have enough cash to withdraw at once to finance the purchase of devices. This seemed to be challenges as they had to pay by installment for long without being given the machines.

Bleaching of papers used to issue fiscal receipts seemed to be a big challenge to both TRA and traders especially during audit, as some of documents are too difficult to make reference. Note that for tax audit purposes one is required to maintain documents for five years, here there is a big cases since majority of papers used are not durable and bleaches within very short time.

From the observed z-report summary some important items were missing for easy determinations of VAT payable. The summary was supposed to contain input as well so as the account offsets direct/automatically. But unfortunately is not so as a result many taxpayers collect receipts from different corner of the city as input tax evidence purposely to reduce tax payable.

Likewise TRA officials were facing some challenges of which others are the same as that traders facing such as network.

Also the lack of technical and mechanical knowledge isa challenge as a result of failure to perfectly supervise the management of EFD. However this needs TRA to give more emphasis on providing technical and mechanical knowledge to officials.

Also marketing and creating more awareness to business men on the importance of EFDs for the development of the nation. There was every sign that this information lacked among businessmen during the study.

Theoretically, EFDs are supposed to be very effective in processing VAT returns; to reduce the tax-reporting burden on businesses, while improving the efficiency and effectiveness of government operations. It is expected to provide timely and accurate tax information to TRA, and increase the availability of electronic tax filing. Practically, that will only become possible if many of the challenges of adoption indicated in this study will be addressed. In this process TRA may need also to see to it that its officials, at least understand how EFDs operate to lessen unnecessary misunderstanding, and for the purposes of making them capable of giving informed solutions to experienced EFD problems.

5.2 Recommendations

5.2.1 EFD is purely ICT which is mostly recommended in this sophisticated world which is about to replace the entire mechanical world.

Being the case there is no way can Tanzanians VAT tradersto be left behind with this technology under globalization**.**

It is strategically collecting tax in more cost effectively manner which is contributed by Information and Computer Technology considering the importance of using EFD to both VAT traders and TRA as well. However for the sake of this research my recommendation is to all VAT traders to acquire and use EFD with the below modifications despite of the challenges early discussed.

5.1.2 Machine should be configured to the extent that it has two entries i.e. debit for sales which enters output taxes and credit side which enters input taxes which automatically set off the difference.

Thus when a trader makes purchases his full particulars are entered including TIN on the suppliers EFD thus input tax paid to supplier enters directly to his credit side of his VAT account through his EFDMS. Table 4.1 which is a z report summary as appears in TRA servers' shows only output particulars. But while discussing the importance of EFD to users it was seen that, it helps to control stock by punching all the purchases and sales made in the EFDMS. Despite all these being punched in the device they do not display on the TRA servers at all except for the sales. While preparing VAT returns both VAT traders and TRA officers computes input tax (tax on purchases) out of the electronic fiscal device system. Or in other word VAT returns are prepared manually despite of the sophistications. Due to these challenge this research proposes the best way to solve this is to have machines and Electronic Fiscal Devices Management System which is capable of indicating both debit and credit side which will automatically offset to each other and determine the tax there on.

5.1.3 Training Users on Best Ways of Using EFDs as required under Regulation 7.1(i) of the VAT-EFD regulations, 2010; which stress the need of having EFD users being best trained to be able to administer them properly.

However, the field findings revealed that most EFD users did not get the best training required. As a result a lot of operational problems have been experienced by users. Some of them included knowledge of how to control stock by the traders, issue receipts with the name of the buyer, Taxpayer Identification Number of the Buyer and Address of thebuyer. Also the EFD users during research period were issuing receipts without identifying the item sold of which one could claim input tax for purchase of sugar while in fact it was cooking oil. All these are full indication that traders were not taught as per regulations. Due to this, the research is on view that EFD users are required to be effectively trained on how to use the EFD by the suppliers.

5.1.4 Training TRA officials to acquire technical and mechanical knowledge for the TRA to maintain EFD malfunctions for free in order to reduce the cost and time of maintenance.

This is possible through Information and computer Technology department. This case is simple, since already there is a department of ICT within TRA which is believed to be capable of doing the same as that of EFD supplier. The un answered question of the VAT traders to TRA is why TANESCO is managing to supply and maintain electricity metre and LUKU while TRA can't do it. For this case I suggest as well for the TRA to supply and maintain the device the same as done by TANESCO.

In case the authority cannot implement the above then the word may under regulation 7.4 needs to be removed so as the issue of opening branches to bemandate.

5.1.5 Enforcement for the issuance of receipt need to be done to a large extent in Dar es Salaam and the major outletsi.e. Bagamoyo, Kibaha and Ikwiriri.

During this research majority of VAT traders openly spoke out that they sometimes fail to issue fiscal receipts due to absence of purchases receipts to support input taxes. They told the researcher that due to monopoly of some whole sellers in Dar es Salaam they don't issue them with receipt for the purchases made. The researcher thinks the best way to enforce issuance of receipts in up countries and the whole country is to impose tight enforcement in Dar es Salaam. And this is specifically at Dar es Salaam major outlets such as Bagamoyo, Kibaha, Ikwiriri and some more other places where there are roads or ways going to up countries likes railway stations

TRA need to enforce the suppliers to supply the genuine thermo papers used to print receipts and z-reports.

It was seen while discussing the challenges of EFD that the papers used to print fiscal receipts bleach very easily due the quality of papers used. The law requires thermo papers to be used of which the print outs can last for five years as recommended by the regulations.

5.1.7 Number of GPS provider need to be increased instead of VODACOM and AIRTEL ALONE. Also ICT department for TRA needs some improvement so as to reduce regular network problems.

Note that Electronic Fiscal Devices operations is controlled by normal mobile phones networks as mentioned VODACOM and AIRTEL. Since there have been so many complains by EFD user i.e. TRA and VAT traders on the network problems then is better for GPS used to be increased and also the TRA department dealing with ICT to improve greatly to reduce network problems. On the other hand if the issue of increasing GPS is impossible then better for TRA to have its own GPS as a way to completely remove network problem.

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APPENDIXES

Part A: Questionnaire for VAT traders

1. When did you start using EFD?

2. How much did it cost you to acquire the device?

3. Was the whole amount initially incurred borne by the government?

4. How long did it take to recover your cost incurred?

5. Has the use of EFD helped you to reduce the cost of your business administration?

6. What are the major challenges faced on using EFD?

7. Are these challenges hindering your business prosperity?

8. How many times the device did have malfunction?

9. How long did it take to report the matter to supplier and the authority?

10. How long did it take for the machine to recover from malfunction?

11. Since you started using EFD have you ever been served an offence for breaching EFD regulations?

12. If the use of EFD could be an option would you opt to use it? Give reason if any……..

13. What is your opinion over the use of EFD?

PART B: Questionnaire for TRA Staffs

1: What is EFD?

2: When did you hear about it for the first time?

3: What are the major problems encountered on administering the use of EFD?

4: What are the reasons for taxpayer's noncompliance of EFD provisions?

5: Is it the right time for TRA to introduce EFD?

6: What do you think need to be done to improve usage and administration of EFD?