ASSESSING THE EFFICIENCY OF ELECTRONIC FISCAL DEVICES IN ENHANCING TAX REVENUE COLLECTION AND BUSINESS OPERATIONS IN TANZANIA: A CASE OF ILALA MUNICIPALITY

BY

FEISAL AMARY

A Dissertation Submitted in partial fulfilment requirement for the Award of the Degree of Master of Business Administration in Corporate Management (MBA-CM) of Mzumbe University

December, 2020
CERTIFICATION

We, the undersigned certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled, “Assessing the Efficiency of Electronic Fiscal Devices in Enhancing Tax Revenue Collection and Business Operations in Tanzania: A Case of Ilala Municipality” in partial fulfilment of the requirement of Mzumbe University for the award of the degree of Master of Corporate Management.

_____________________
Major Supervisor

_____________________
Internal Examiner

_____________________
External Examiner

Accepted for Mzumbe University, Dar es Salaam Campus College

_____________________
CHAIRPERSON, DAR ES SALAAM CAMPUS COLLEGE BOARD
DECLARATION

AND

COPYRIGHT

I, Feisal Amary Hamdan, 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.

Signature: ..................................................

Date: ......................................................

© 2020

This Dissertation is copyright material protected under the Berne Convention, the Copyright Act 1999 and other international and national enactments, in that behalf, on intellectual property. It may not be reproduced by any means in full or in part, except for short extracts in fair dealings, for research or private study, critical scholarly review or discourse with an acknowledgement, without the written permission of Mzumbe University, on behalf of the author.
ACKNOWLEDGEMENT

This dissertation is a product of several social networks and encounters with several people. I would like to recognize the support I received from my Supervisor Dr. Kinyondo, G. of the Mzumbe University Dar es Salaam Campus for her tireless technical guidance and constructive criticism from the infant stage of the study to the final stage. I appreciate and highly recognize your work; may Almighty God bless you and your family; thanks a lot.

Secondly, I would like to thank my family: my beloved wife Santa Ramji and child Faris Feisal for their patience during my absence in course of pursuing this study. I also, would like to thank my parents Mr. Amary Jumaan and Mrs. Fatuma Said for their constant support and encouragement and pray ever since I was young. Also, I recognize the contribution of my friends and colleagues: Juma Ahmed, Suitbert Mambona, Samson Ndile and Anno Steven, of their encouragement and support during my study.

Last, but not least, I would like to thank all respondents in Ilala Municipal and TRA for their cordial participation, I appreciate and therefore, thank all and authorities for their cooperation during the process. However, the customary absolution stands: I am responsible for the material in this dissertation and its interpretation.
DEDICATION

I dedicate this work to my beloved wife Santa Ramji and our beloved son Faris Feisal.
**LIST OF ABBREVIATIONS AND ACRONYMS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBM</td>
<td>Electronic Billing Machines</td>
</tr>
<tr>
<td>ECR</td>
<td>Electronic Cash Registers</td>
</tr>
<tr>
<td>EFD</td>
<td>Electronic Fiscal Devices Machines</td>
</tr>
<tr>
<td>EFP</td>
<td>Electronic Fiscal Printers</td>
</tr>
<tr>
<td>ESD</td>
<td>Electronic Signature Devices</td>
</tr>
<tr>
<td>ETR</td>
<td>Electronic Tax Registers</td>
</tr>
<tr>
<td>FEDs)</td>
<td>Fiscalised Electronic Devices</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td>NBS</td>
<td>National Bureau of Statistics</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PCCB</td>
<td>Prevention and Combating Corruption Bureau</td>
</tr>
<tr>
<td>RAS</td>
<td>Regional Administrative Secretary</td>
</tr>
<tr>
<td>SET</td>
<td>Social Exchange Theory</td>
</tr>
<tr>
<td>TRA</td>
<td>Tanzania Revenue Authority</td>
</tr>
<tr>
<td>URA</td>
<td>Uganda Revenue Authority</td>
</tr>
<tr>
<td>URT</td>
<td>United Republic of Tanzania</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
</tbody>
</table>


ABSTRACT

The study assessed the efficiency of EFDs in enhancing tax revenue collection and business operations in Ilala Municipal, Dar es Salaam region. The study was guided by three specific objectives: the extent to which the adoption of EFDs has raised the tax revenue collection; the benefits of EFDs in improving business operations; and the challenges still facing the adoption of EFDs.

The study employed a descriptive survey research design and applied both quantitative and qualitative approaches. The data were collected using questionnaires, interviews, observation and documentary analysis. The sample size was 98 randomly selected respondents and two TRA officials. The primary data were collected through questionnaires and interview while secondary data were collected through documentary reviews. The obtained data were then analysed using SSPS software to obtain frequency and percentage.

The research findings indicate that, the adoption of EFDs has increased tax revenue collection in nominal terms. However, the growth rate of tax collection is not promising. This is partially because most of traders do not issue EFD receipts promptly thus, the reported sales are not representative of the actual sales at the selling centres. Nonetheless, EFDs have been found to be reliable in terms of tax calculation as the tax is based on the reported sales by the trader and the tax services are accessible. Indeed, the most mentioned benefit of EFDs is record keeping of up to five years. However, the adoption of EFDs has been faced by challenges to both taxpayer and the tax authority. For example, traders complained of the cost associated with the purchase of the EFD machines as the biggest challenge, followed by lack of trust with EFDs. The study recommends that the tax authority should collaborate with business community to try to find the means to enhance tax compliance and eliminating challenges posed in the adoption of EFDs in tax systems in Tanzania.
# TABLE OF CONTENTS

CERTIFICATION ........................................................................................................ i
DECLARATION AND COPYRIGHT ........................................................................ ii
ACKNOWLEDGEMENT .......................................................................................... iii
DEDICATION ............................................................................................................ iv
LIST OF ABBREVIATIONS AND ACRONYMS ..................................................... v
ABSTRACT ................................................................................................................ vi
TABLE OF CONTENTS ........................................................................................... vii
LIST OF TABLES ....................................................................................................... x
LIST OF FIGURES .................................................................................................... xi

## CHAPTER ONE ........................................................................................................ 1
### INTRODUCTION .................................................................................................. 1
1.0 Introduction ............................................................................................................ 1
1.1 Background of the Problem ................................................................................... 1
1.2 Statement of the Problem ....................................................................................... 3
1.3 Research Objectives ............................................................................................... 3
1.3.1 General Objective ............................................................................................... 3
1.3.2 Specific Objectives .............................................................................................. 3
1.4 Research Questions ................................................................................................ 4
1.5 Significance of the Study ....................................................................................... 4
1.6 The Scope of the Study ......................................................................................... 4
1.7 Organization of the Dissertation ............................................................................ 5

## CHAPTER TWO ....................................................................................................... 6
### LITERATURE REVIEW ....................................................................................... 6
2.1 Introduction ............................................................................................................. 6
2.2 The Historical Perspectives of the Electronic Fiscal Devices (EFDs) .................. 6
2.3 Types of Electronic Fiscal Devices (EFDs) .......................................................... 7
2.3.1 Electronic Tax Registers (ETRs) ...................................................................... 7
2.3.2 Electronic Cash Registers (ECRs) .................................................................... 7
CHAPTER THREE ................................................................................................. 19
RESEARCH METHODOLOGY ........................................................................... 19
3.0  Introduction ................................................................................................. 19
3.1  The Study Area ............................................................................................. 19
3.2  Research Design ............................................................................................ 19
3.3  Study Population and Sample Size ................................................................. 20
3.3.1 Study Population ......................................................................................... 20
3.3.2 The Sample Size ......................................................................................... 20
3.4  Sampling Procedures ...................................................................................... 20
3.5  Data Collection Techniques ........................................................................... 21
3.5.1 Primary Data ............................................................................................... 21
3.5.2 Secondary Data ............................................................................................ 23
3.6  Units of Inquiry .............................................................................................. 23
3.7  Data Analysis ................................................................................................ 24
3.8  Ethical Consideration ..................................................................................... 25

CHAPTER FOUR .................................................................................................... 26
DATA PRESENTATION AND ANALYSIS ......................................................... 26
4.1  Introduction .................................................................................................... 26
4.2  Demographic characteristics of Respondents ................................................. 26
4.3  Topical findings .............................................................................................. 29
4.3.1 The Extent to which EFDS has enhanced Tax Revenue Collection ............. 30
4.3.2 Benefits of EFDS in Improving Business Operations ................................. 35
4.3.3 Challenges Facing the Adoption of EFDS in Tax Revenue Collection ......... 37

2.3.3 Electronic Fiscal Printer (EFP) ........................................................................... 8
2.3.4 Electronic Signature Devices (ESDs) ............................................................... 8
2.4 The Role of EFDS in Tax Revenue Collection and Business Operations .......... 8
2.5 Challenges Facing the Deployment of Electronic Fiscal Devices (EFDs) ........... 10
2.6 The Social Exchange Theory (SET) .................................................................. 11
2.7 Empirical Review of Literature ........................................................................ 13
2.8 Literature Synthesis and Research Gap ............................................................ 16

CHAPTER FOUR .................................................................................................... 26
DATA PRESENTATION AND ANALYSIS ......................................................... 26
4.1  Introduction .................................................................................................... 26
4.2  Demographic characteristics of Respondents ................................................. 26
4.3  Topical findings .............................................................................................. 29
4.3.1 The Extent to which EFDS has enhanced Tax Revenue Collection ............. 30
4.3.2 Benefits of EFDS in Improving Business Operations ................................. 35
4.3.3 Challenges Facing the Adoption of EFDS in Tax Revenue Collection ......... 37
4.4 Chapter Summary ........................................................................................................ 41

CHAPTER FIVE ...................................................................................................... 42
DISCUSSION ON FINDINGS ................................................................................ 42
5.0 Introduction .......................................................................................................... 42
5.1 The extent to which the adoption of EFDs has enhanced tax revenue ................. 42
5.2 The ways in which the adoption of EFDs has improved business ....................... 43
5.3 The challenges facing the adoption of EFDs in tax revenue collection .............. 44
5.4 Other challenges ................................................................................................. 45

CHAPTER SIX ........................................................................................................ 46
SUMMARY, CONCLUSION AND RECOMMENDATIONS ...................................... 46
6.1 Introduction .......................................................................................................... 46
6.2 Summary of findings ............................................................................................ 46
6.3 Conclusion ........................................................................................................... 47
6.4 Recommendations ............................................................................................... 47
6.5 Areas for Further Research .................................................................................. 48

REFERENCES ....................................................................................................... 50
APPENDICES ......................................................................................................... 55
LIST OF TABLES

Table 3.1: Units of Inquiry and Information to be obtained ........................................ 24
Table 4.1: Gender of respondents .............................................................................. 26
Table 4.2: Ages of respondents .................................................................................. 27
Table 4.3: Marital status of respondents ................................................................. 27
Table 4.4: Education level of respondent ................................................................. 28
Table 4.5: The nature of your business ....................................................................... 28
Table 4.6: Number of Years in Business ..................................................................... 29
Table 4.7: Number of Years using EFD .................................................................... 29
Table 4.8: The automation as the reason for EFDs Adoption .................................... 30
Table 4.9: Costs Reduction Enhanced the Adoption of EFDs ................................... 31
Table 4.10: EFDs have Made Tax Collectors More Responsive ............................... 31
Table 4.11: EFDs in Tax payment is Understandable and Easy to Use ....................... 32
Table 4.12: Domestic VAT Revenue (TZS BILLION) Collected: .............................. 32
Table 4.13: Number of Registered VAT taxpayers 2006/07 to 2017/18 ................... 34
Table 4.14: Trend in TAX collection in Ilala Municipal: 2006/07-2018/19 ............. 35
Table 4.15: The use EFDs is More Reliable in tax payment ................................. 35
Table 4.16: EFDs have Made Tax Service More Accessible ..................................... 36
Table 4.17: Cost of Purchasing EFD Machines ......................................................... 37
Table 4.18: Lack of Education on EFDs ................................................................. 37
Table 4.19: System Breakdown and Network Error of the system ......................... 38
Table 4.20: Personal Attitudes Pose Challenges .................................................... 38
Table 4.21: Lack of Trust Pose the Challenge ......................................................... 39
LIST OF FIGURES

Figure 2.1: Conceptual Framework ........................................................................... 17
Figure 4.1: Trend in Growth of VAT: 2006/07 – 2017/18........................................... 33
CHAPTER ONE
INTRODUCTION

1.0 Introduction
This chapter presents the introductory part of this study to assess the efficiency of EFDs in enhancing tax revenue collection and business operations in Tanzania; a case of Ilala Municipal. The chapter consists of background information of the study, statement of the problem, research objectives which are general and specific as well as their corresponding research questions. The chapter, also, covers the significance, the scope of the study.

1.1 Background of the Problem
Tax collection in any country provides the basis for which economic and social development can be attained. The tax collection helps the Government to finance important economic projects as well as social services (Kira, 2016). The infrastructural construction activities and social services in the country all depends much on revenues collected by the government via taxes.

According to Eilu (2018) tax revenues in a vital pillar in the country for which the economic growth is based. It is the main source of Government’s revenue for state building, minimizing the dependence of foreign assistance and debts, increasing the fiscal effects of trade liberalization as well as providing the basic public goods and services. Tax collection, as Ebeke (2010) puts, enhances countries development in almost all spheres of economic wildlife.

Following the importance of tax revenue collection, most of countries around the globe have made efforts to enhance tax administration so that they can reduce tax evasion and avoidance (Kira, 2016). The countries have reformed and others are in the process of attempting to reform their tax systems to obtain enough revenues to finance various projects. This is due to tax revenue collection which makes these countries to ask for foreign aids and debts which are accompanied by several conditional which are burdensome.
In Sub-Saharan African Countries as noted by Ebeke and Ehrhort (2018) that, collected tax revenue is of 30% to 40% of their national budget in the year 2008. This has forced them to go for foreign aids so as to supplement their budgets. The report of 2010 by the World Bank shows that, the Sub-Saharan Africa received 40.1 billion US dollars as aid in the year 2008. The study by Mascagni et al (2014) shows that, the tax revenue collected as a percentage of total estimated tax revenue potential is also lower in Sub-Saharan African Countries which ranges from 10% to 20% as compared to OECD Countries which ranges from 30% to 40%.

This has accelerated attempt to increase tax revenue by a number of Sub – Saharan African countries. The efforts made include, among others, the introduction of new taxes including the Value – Added Taxes (VATs) (Eilu, 2018), this is a tax on consumption stages of products and services. It was estimated that, in the year 2013 VAT would have contributed 31.7% of total revenues in Uganda, 31% in Rwanda, 27.6% in Tanzania 26.4% in South Africa and 23% in Kenya (URA, 2013).

However, the studies by Mativo et al. (2015) show that tax authorities in these countries face challenges in attaining the estimated amount of revenue. The mostly reported challenge is high levels of non-compliance among VAT payers and potential VAT payers among others. This has made the governments to improve the methods and tools of enhancing the collection of VAT by introducing the use of electronic Fiscal Devices (EFDs).

In Tanzania, VAT was introduced in 1998, replacing a sales tax and a number of other indirect taxes (Casey and Castro, 2015). However, the administration of VAT has been varied and has never reached the level originally anticipated (ibid) in 2002, the Tanzania Revenue Authority mandated the use of non-fiscalized Electronic cash Registers (ECRs) to enhance VAT compliance and increase VAT Collection. The use of ECRS did not contribute significantly to VAT revenue collection from 2002 to 2008 (TRA, 2012), which led to the introduction of the electronic Fiscal Devices (EFDs) starting the 2009/2010 fiscal year for all registered VAT tax payers across all sectors.
1.2 Statement of the Problem
The introduction of EFDS in Tanzania in the year 2010 aimed at improving tax compliance and revenue collection which were the main challenges faced by the tax administration. The micro study done by the Prevention and Combating of Corruption Bureau (PCCB) in the year 2018 shows that the introduction of EFDS in Tanzania passed through two phases in which the first phase focused on registered VAT traders whereas the second phase focused on non-VAT registered traders whose turnover profit ranges from Tshs. 14 million and above per annum. The formed phase started in 2010 whereas the second phase commenced in 2013. The use of EFDS doubled the revenue collection by 59% in the period 2010 to 2013 (TRA, 2017)

The use of EFDS was expected to reduce several challenges in tax administration as well as motivating traders to voluntarily register as taxpayers. For example, EFDS were expected to reduce costs, enhance record keeping as well as enhancing business operations so that business profits increases. Despite the notable increase in revenue collection since the introduction of EFDS, low tax compliance remains a critical challenge in Tanzania (PCCB, 2018). This poses the question of efficiency of EFDS in tax revenue collection and business growth in Tanzania. This study sought to assess the efficiency of EFDS in enhancing revenue collection and business operations in Tanzania. The study focused in Ilala Municipal, Dar es Salaam region. This is because Ilala has big businesses, but there is inadequate empirical evidence available regarding taxes and the use of EFDS.

1.3 Research Objectives
1.3.1 General Objective
The study intends to assess the efficiency of EFDS in enhancing tax revenue collection and business operations in Tanzania; a case of Ilala Municipal.

1.3.2 Specific Objectives
The study had the following specific research objectives:
(i) To assess the extent to which the adoption of EFDs has enhanced tax revenue collection.

(ii) To find out the ways in which the adoption of EFDs has improved business operations.

(iii) To find out the challenges facing the adoption of EFDs in tax revenue collection and business operations.

1.4 Research Questions
The study tried to answer the following research questions:

(i) To what extent the adoption of EFDs has enhanced tax revenue collection and business operations?

(ii) In what ways the adoption of EFDs has improved business operations?

(iii) What are the challenges ahead of the adoption of EFDs in tax revenue collection and business operations?

1.5 Significance of the Study
The assessment of the efficiency of the adoption of EFDs in enhancing revenue collection and business operations is of great importance. This study is expected to provide information which would help tax planners, policy makers and stakeholders in business to understand the role of electronic fiscal devices in enhancing revenue collection as well as business performance. The study findings, further, provide issues of concern which can best make EFDs more relevant, hence, helps the tax authority to adopt the recommended strategies to improve the tax collection. The study, also, contributes to the general body of knowledge in tax management and business fields. Finally, the study findings and recommendations serve as source of reference materials to future researchers who would wish to do a deeper study related to this research problem.

1.6 The Scope of the Study
This study covered the period from the year 2010 when the adoption of EFDs began to date. It involved the sample of registered traders who use EFDs in their business operations in Ilala Municipality and TRA officers who are working at Ilala TRA regional office.
1.7 Organization of the Dissertation

This study comprises of five chapters. Chapter one provides the introductory part in which the background information, statement of the problem, research objectives and their respective research questions are given. The chapter, also, presents the significance of the study and the scope of the study. Chapter two is about Literature Review. In the chapter, both theoretical and empirical literatures are revised along with relevant theories as well as the conceptual framework and research gap. The third chapter involves Research Methodology where the various methods and tools used to study the problem at hand are given. It provides the description of the research area, research design, population and samples of the study. The sampling techniques, data collection methods, analysis and ethical considerations are also covered in this chapter. The fourth chapter provides the findings of the study, their analysis whereas the fifth chapter provides the discussions of the findings. The last chapter, chapter six provides the summary of the study, conclusions as well as recommendations for both policy implications and further studies.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction
This chapter provides the review of relevant literatures on the research problem. It involves reviewing articles journals and documents in orders to find various issues related to the adoption of EFDs in Tanzania. The chapter begins by providing the historical perspectives of EFDS, followed by theoretical aspect of literatures and empirical review of literatures. Finally, the conceptual framework which guided the study was discussed. The research gap was established thereafter.

2.2 The Historical Perspectives of the Electronic Fiscal Devices (EFDs)
The history of the use of EFDs dates as far back as 1970s’ it is the time when the electronic cash registrars (ECRs) started to be used by large retailers in developed countries (Casey and Castroy, 2015). It was first used in Italy in support of its fiscal control Strategy (OECD, 2013). In 1988, Greek tax agency started adopting the use of Fiscal devices and extended their scope to include electronic signature devise, (ESDs) (Casey and Castroy, 2015). In the same period, Japan and several European countries started to use EFDs (Ibid)

According to Casey and Castro (2015), the implementation of EFDs progressed on a regional basis, spreading from Mediterranean to the neighbouring former Eastern Bloc countries. Then spread of EFDS went on in Atlantic to Latin America and then to Eastern Africa. The Bulgarian and Romanian tax agencies started using EFDS after the influence of Greece before the year 2000. These were followed by Argentine and Brazilian revenue administrations after gaining experience from Italy’s tax administration (Casey & Castor, 2015).

In East Africa, Kenya was the first country to implement EFDs in 2005, followed by Tanzania in the year 2010 and Rwanda in 2014 (Eilu, 2018). There was wide scepticism regarding the value of EFDs in Kenya at the initial implementation strange (Mativo et al., 2015). Since then the use of EFDS in Kenya has not brought substantial impact in tax revenue collection (Casey & Castro, 2015).
In Tanzania, EFDs were introduced in 2010, where the electronic tax Registrars (ERDs) were put in use according to Kapera (2017). The aim of introduction of EFDs was to improve VAT collection thereby eliminating non-issuance of receipts, criminating under-invoicing of sales transactions, improving filing process of VAT returns as well as assisting traders in keeping proper records of their businesses. The deployment of EFDs in Tanzania has faced numerous challenges including non-compliance as well as lack of effective follow-up enforcement (Naibei et al., 2012).

2.3 Types of Electronic Fiscal Devises (EFDs)

Niosi (1994) defines the Electronic Fiscal Devises as small machines or mini-computers that are used to determine the amount of VAT remitted to the government. The devices are designed special for recording each business transaction made by traders to calculate the amount which is supposed to be remitted to the tax authority as VAT. There are four types of EFDs, which include Electronic cash registers (ECRs) Electronic Tax Registers (ETRs), Electronic Fiscal Printers (EFPs) and Electronic signature Devices (ESDs) (Soga, 2014).

2.3.1 Electronic Tax Registers (ETRs)

This is an electronic device used to issue receipts manually where the frequency of receipting is not too high. They contain an in-built read only memory, that is, the memory which stores tax information at the true of sale (Niosi, 1994). In these devices, there are special features which make them not easy to temper. This implies that they enhance transparency and fairness among taxpayers. According to Eilu (2018) ETR calculates the tax value for every transaction made and stores this information in a permanent memory that can only be accessed by the tax authority.

2.3.2 Electronic Cash Registers (ECRs)

Electronic Cash Registers (ECRs) refers to a point of sale terminal that records information from barcode scanners, weighing scales as well as credit and debit card machines (Eilu, 2018).
2.3.3 **Electronic Fiscal Printer (EFP)**

This is an electronic fiscal device used by comprised retail outlets, it connected to a Computer network and stores every sale transactions or details made in its fiscal Memory (PCCB, 2018). The devices are commonly used in supermarkets.

2.3.4 **Electronic Signature Devices (ESDs)**

These are EFDs designed to authenticate by signing any personal computer (PC) produced financial documents such as tax invoice and used in conjunction with Computerized accounting system (Dago, 2014). ESDs use a special computer programme to generate a unique number (signature) which is appended to end printed to every invoice issue by the user’s system (PCCB, 2018).

Apart from these four types above, there is another EFD called Electronic Fuel Pump Printer (EFPP), which is used in petrol stations to produce every sale transaction. This device is directly connected to fuel pump end controls the pump. It is automated systems printed to every invoice issued by the use system (PCCB, 2018).

2.4 **The Role of EFDs in Tax Revenue Collection and Business Operations**

The deployment of EFDS aimed primary at addressing the challenges faced by government tax authorities in tax revenue collection. The most significant challenge was high level on non-compliance among VAT – payers and potential VAT – payers (Eilu, 2018), it was important, thus to conceive on efficient and effective use of Information and Communication Technology (ICT) thereby deploying the Electronic Fiscal Devisees (EFDs).

The use of EFDs, as Sago (2014) notes, it helps the tax authorities to collect taxes from trade easily. It simplifies payment of taxes from business entities by enhancing online payments. The devices have wireless connection between taxpayers’ central servers which show exact amount for each registered VAT payer to pay. The use of EFDs improves reporting system of sales data done by business entities which eliminates the possibilities of escaping from paying the required tax (URT, 2010).
Like any other electronic system which used, ICT the fiscal devices have helped the tax authorities to reduce if not to eliminate follow-up costs. The follow-up costs came as a result of tax authority employees entering into the streets to search for traders who either delay or escape from paying relevant taxes (Kapera 2017). However, business people have been helped to reduce costs of transporting to and from tax authorities to pay their dues, since now every payment can easily be done via online system. This saves fame and raise business operational dealings as most of the time a person deals with business issues without moving out to pay taxes for away from business centres (URT, 2010).

The use of EFDs improves efficiency of tax control and secure revenue collection, improves access to information, enhances business statistics and above all, provides the uniform application of tax legislations (Peha, 1999). The use of EFDs has reduced the possibilities of corruption as it has minimized direct contacts between tax collection officers and business people or their consultants (Sago, 2014).

According to Chiwango (2012), the deployment of EFDS in Tanzania has increased the amount tax revenue collection. The report by National Bureau of Statistics (2013) shows that, before the introduction of EFD in the financial year 2009/2010 TRA collected Tshs. 785,882.4 million but in the financial year 2010/2011 a year after the introduction of EFDs, the authority collected Tshs. 791,462.91 Million; and during the financial years 2011/2012 the revenue collection was raised to Tshs. 1,086,374.0 million this is about 40% increase, which show that the use of EFDs has shown green light forwards tax collection (Sago 2014).

Accordingly, Yalemlesfa (2011) revealed that, despite the fact that using EFDs reduces the operation costs of Government, increases VAT collection, the devices improve business income of tax payers. The fiscal devices provide timely and accurate tax information to business and increase the availability of electronic tax filing (ibid). EFDs have helped to reduce tax evasions and tax non-compliance.
Consonantly, EFDs provides business security to dealers this is due to all data to be saved, in to the fiscal memory where they cannot be deleted or tempered EFDs minimizes the possibility of utilization of parallel and fake receipts, guarantee simple access of online expense data and fast section to deviation or acts of neglects over the machine (Eilu, 2018). The devices encourage productive time administration and consistence observation and enhance the recovery of factory data of different changes. Chege et al. (2015) adds that, EFDs, encourage benefits accomplished through mobilization, incorporate enhanced reporting, contrast of record exchanges as well as programmed compromise of government forms and consistence testing of bank documents.

2.5 Challenges Facing the Deployment of Electronic Fiscal Devices (EFDs)

Although the deployment of electronic fiscal devices (EFDs) was anticipated to bring about the solution of non-compliance by VAT-payers and potential VAT-payers, but the process still had some challenges. The challenges can be on the part of tax authorities or the taxpayers, but the challenges may come out from EFDs, as a tool of tax collection for example:- According to Chiwango (2012), EFDs in retail stores and restaurants are generally assumed to contain accurate information, but once they are equipped with specialists’ “Sales suppression” software, they can be used to facilitate elaborate tax frauds and brings about the challenge of losing anticipated tax revenue.

Another challenge facing the adaption of EFDs include the presence of weak legal or regulatory institutions, out-dated tax policies, inadequate on non-existent of civil service rules, regulations and compensation levels for attracting and retaining qualified staff (Soga, 2014). Also, the deployment of EFDs face the challenges of the absence of international accounting and professional standards, which are indispensable for the tax purposes as well as lack of the modern financial and banking standards institutions (Jacobs, 2013). These challenges face most of tax authorities in developing countries.
There is failure of the tax authorities to provide relevant training to VAT- payers and potential VAT- payers who are to use EFDs. This howled into high level of tax non-compliance. Also, during the investigation of EFDs usage, opposition from the business people were evidenced in most areas in Tanzania such as Morogoro, Mbeya and Dar es Salaam (URT, 2010). All of them suppresses the efficiency anticipated from EFDs.

High prices of a standard EFD machine is mentioned by Siraju (2015) as another challenge which makes business people to avoid their use. This may be due to inadequate capital available for the business, thus, to add another burden of buying EFDs become high mountain to climb. The availability of EFDs is limited especially in top country which poses the challenge of poor compliance.

2.6 The Social Exchange Theory (SET)

This is a general sociological theory concerned with understanding the exchange of resources between individuals and groups in an interaction situation. The theory involves a serious of interactions that generate obligations (Cropanzano & Mitchell, 2005). The interactions are usually seen as interdependent and contingent on the actions of another personal. According to Molm (1994), the independence which involves mutual and complimentary arrangement comprises a defining characteristic of social exchange.

According to the reciprocity theory, the action of one party leads to a response of another. This implies that, if one party supplies a benefit, the receiving party must respond in kind (Cropanzano and Mitchell, 2005). The interdependence reduces risks and encourages cooperation (Molm, 1994).

Basing on the above explanations, the theory or social exchange is viable to this study as it explains the interdependence between tax authority and taxpayers. The introduction of Electronic Fiscal Devices by the tax authority should be perceived in positive way by taxpayers. Therefore, today the taxpayers must consider this move as beneficial to them so that they comply (Uhl–bien & Maslyu, 2003).
Therefore, it can be concluded, that the efficiency use of EFDs depend much on the perceived benefits of the taxpayers. If they positively perceive it, most of business people will go for EFDs applications, hence, increases the compliance to VAT and other taxes payment, which will in turn increases the amount of tax revenue collected. However, if they negatively perceive the use of EFDs, the non-compliance level will increase; hence, tax revenue collection will be low.

Although the deployment of electronic fiscal devices (EFDs) was anticipated to bring about the solution of non-compliance by VAT-payers and potential VAT-payers, the process had some challenges. The challenges can be on the part of tax authority or the taxpayers, but the challenges may come out from EFDs, as a tool of tax collection for example according to Chiwango (2012), EFDs in retail stores and restaurants are generally assumed to contain accurate information, but once they are equipped with specialist’s “Sales suppression” software, they can be used to facilitate elaboration of tax frauds which brings about the challenge of losing anticipated tax revenue.

Another challenge facing the adaption of EFDs include the presence of weak legal or regulatory institutions, out-dated tax policies, inadequate on non-existent of civil service rules, regulations and compensation levels for attracting and retaining qualified staff (Soga, 2014). Also, the deployment of EFDs face the challenges of the absence of international accounting and professional standards, which are indispensable for tax purposes as well as lack of the modern financial and banking standards and institutions (Jacobs, 2013). These challenges face most of tax authorities in developing countries.

There is failure of the tax authorities to provide relevant training to VAT-payers and potential VAT-payers who are to use EFDs. This might lead into high level of tax non-compliance. Also, during assimilation of EFDs usage, opposition from business people were evidenced in most of areas in Tanzania such as Morogoro, Mbeya and Dar es Salaam (URT, 2010). All of them suppresses the efficiency anticipated from EFDs. High prices of a standard EFD machine is mentioned by Siraju (2015) as
another challenge which makes business people to avoid their use. This may be due to inadequate capital available for the business, thus, to add another burden of buying EFDs become high mountain to climb. The availability of EFDs is limited especially in top country which poses the challenge of poor compliance.

2.7 Empirical Review of Literature

Different studies have been done on Electronic Fiscal Devices (EFDs) in Tanzania and elsewhere. For example, Kapera (2017) assessed the effectiveness of Electronic Fiscal Devices (EFDs) in tax collection in Tanzania; a case of Arusha City using a both descriptive and exploratory design. In this study, it was found that before introducing EFDs in Tanzania, revenue obtained from VAT registered taxpayers was growing. However, after the introduction of EFDs nothing significant was evidenced in VAT-revenue collection. This was against the reasons for adopting EFDs machine which included, among others, raise VAT collection, reducing tax collection costs and integration of taxation systems with other administrative system. It was, further found that, the implementation of EFDs faced a number of challenges which include: high cost of purchasing the devices and lack of education on the side of taxpayers concerning the use of EFDs. The study recommended the review of purchasing price and maintenance costs downwards, improvement on system or network breakdown, increase of education, awareness and motivation on use.

Another study was done by Soga in 2014 to evaluate the effectiveness of Electronic Fiscal Devices (EFDs) on VAT compliance and revenue collection in Zimbabwe: a case of Zimbabwe Revenue Authority. This study which adopted the qualitative and quantitative research approaches, found that EFDs had achieved moderate compliance and there is no major changes were ascertained on revenue collections that can be attributed to fiscalization. This was found to be caused by various challenges ahead of the process. The challenges include, inability of EFDs to operate the machines, the Revenue Authority’s employees, most of them, also cannot use the gadgets neither can they interpret the reports generated well. The study recommends a thorough review of the fiscalization process to overcome the weaknesses found.
In the year 2016, Kira conducted a study which evaluated the taxpayer’s perceptions on the use of Electronic Fiscal Devices (EFDs) in revenue collection in Dodoma Region. The study analysed the benefits of using EFDs in revenue collection; the perceptions of taxpayers towards the use of EFDs and challenges towards the use of the EFDs in revenue collection. The study which adopted the survey research design show that the majority of taxpayers’ demonstrated advantages of using EFDs machine in revenue collection. The study findings reveal that EFDs has reduced the time it takes to prepare sales report, secure tax information for auditing purpose and transaction as well as ensuring tax rate to be paid by the taxpayers. However, the use of EFDs faced various problems which include: high prices of EFD machines, faint fiscal tax invoices, EFD’s network problem, lack of taxpayer’s education EFDs applications and few suppliers of EFDs machines. The study recommends Tanzania Revenue Authority (TRA) to conduct trainings and workshops with taxpayers on EFDs application, to provide incentives to encourage taxpayers’ adoption of EFDs and to ensure sensitization programmes are done to raise taxpayers’ awareness on EFDs.

The study was done by Siraju (2015) to examine the challenges faced by taxpayers in using Electronic Fiscal Devices (EFDs) in Tanzania, a case study of selected taxpayers in Nyamagana District, Mwanza City. This study adopted both quantitative and qualitative approaches and used descriptive and explanatory research designs. The study found that, the use of EFDs has inherent challenges. The challenges include: lack of education, high cost of the device, lack of sufficient technical experts, and persistent power outage as well as time loss on device operation. However, the study findings show that the use of EFDs has reduced to some extent, the problems of VAT remittance by business operators. The study recommends TRA to address the challenges identified to improve the effectiveness and usefulness of the electronic devices.

Study to assess the challenges facing the adoption of Electronic Fiscal Devices (EFDs) in revenue collection in Morogoro Municipality was done by Cornel (2017). The study employed both deductive and inductive research approaches in collecting
and analysing data. The findings of the study reveal that, there is insufficient availability of EFDs as there are some areas that have not been located with EFDs suppliers. Also, the study found that most of business operators do not adequately know how to use the EFDs properly. On top of that, due to inadequate availability of EFDs suppliers, business operators fail to obtain immediate technical support when needed. Also, there is no reliable power and internet connectivity in Morogoro Municipality. In addition, it was revealed that, some business owners have negative attitude toward the use of EFD machines. The study recommends that, TRA should take measures to ensure that there is enough number of agents supplying EFDs machines in Morogoro Municipality.

The study to assess the impact of Electronic Billing Machines (EBMs) on VAT compliance on Small and Medium Size Enterprises in Rwanda was done by Harelimana et al. (2020). The study which employed descriptive research design used a sample size of randomly sampled 159 people grouped into medium taxpayers, small taxpayers and staff from a population of 709 VAT registered taxpayers located in tax centre of Musanze. The results of this study show that there is positive relationship between the adoption of mandatory usage of EBMs and VAT compliance. The study revealed, further, that after the adoption of EBMs, late filing and non-filing rate of VAT has been reduced as well as increasing timely payment of VAT liabilities has increased. Also, the study indicates that the adoption of EBMs has facilitated the increase in reporting of sales to the tax authority while VAT collections were increased as a result of increased voluntary VAT registration. The study recommends the tax authority to come up with the plan of integrating EBMs within broader tax compliance frameworks that create the environment which will best ensure taxpayers’ voluntary compliance.

In the year 2015, Penduka did a study to assess the efficiency of Fiscalised Electronic Devices (EFDs) in improving revenue collection in selected companies in Harare using the case of the Fiscal Electronic Tax Registers. The research adopted a combination of both desk and field research designs. The findings of this study show that, Fiscal Electronic Tax Registers has increased the revenue base due to tax
compliance. However, the devices have not improved on the VAT collections since the adoption of FEDs. The study noted some challenges that affect tax compliance to include such factors as; resistant to change, reluctance by tax payers to embrace fiscalisation, lack of knowledge, increased administration costs and lack of capacity as well as increased number of informal traders who do not offer receipts. Other challenges include; few suppliers of the devices, unrealistic deadlines, and higher penalties. Other challenges include; few suppliers of the devices, unrealistic deadlines, and higher penalties and also the system were not user-friendly and compatible with other devices. In addition to that, FEDs were found advantageous in a number of ways including; improving internal accountability, management and control of business by recording and storing all sales without manipulation. The study suggests the tax authority to educate traders on the use of FETRs and the need to comply, even in rural remote areas. The study recommends to the government to come up with a more user-friendly system that is easy to use linked to the internet for faster and easy access by Zimbabwe Revenue Authority.

Bostan et al. (2017) did a study on the impact of taxation of the domestic economic transactions on the VAT collection through Electronic Fiscal Devices (EFDs). The study adopted a series of econometric models and linear regression analysis to estimate and test the EFDs influence on VAT collection. The study was conducted on Romanian economic operators based on aggregated data reported by the Romanian Ministry of Public Finance via informative bulletins and by the Fiscal Council. The research findings show that with the introduction of the mandatory use of EFDs, the degree of VAT collection did not increase significantly. The study shows that VAT were not collected as efficiently as before.

2.8 Literature Synthesis and Research Gap
The literatures reviewed so far commonly agree that, the adoption of EFDs in tax collection has not been the answer to all problems in revenue collection. Like anything new, the use of these devices has posed numerous challenges to the revenue authority as well as to the taxpayers. The challenges emanate from lack of technical knowhow to operationalization of both tax collection and business operations as
well. By these challenges, one must ask him/herself whether EFDs adoption is efficient enough to enhance revenue collection and business operations or not. If yes, to what extent are the EFDs machines efficient as tools of revenue collection as most of literatures show that they have not sufficiently helped in tax collection. But if no, what are the challenges faced in using EFDs?

This study assessed the efficiency of Electronic Fiscal Devices in enhancing revenue collection and business operations in Tanzania. The study was done in Ilala District in Dar es Salaam region. This is due to inadequate empirical evidence in the District on the efficiency of EFDs in enhancing revenue collection and business operations. However, the research findings have tried to bridge the gap thereby discussing and highlighting important issues on EFDs as well as giving recommendations for both policy implications and further studies (ref. chapter Four and Five).

![Conceptual Framework](image)

**Figure 2.1: Conceptual Framework**  
*Source: Researcher’s Construct (2019)*

The study is based on the conceptual framework designed by the researcher through the aid of various literatures reviewed. The framework asserts that the use of EFDs enhances VAT compliance which results into VAT tax payer registration hence increase in revenue collection. Also, to the side of business operators, the use of EFDs results in reduced costs of business which enhances profit of the business.
However, the impact of EFDs in revenue collection and business growth will be possible if there are viable tax policies and the stakeholders such as taxpayers and revenue authority staff are well trained on the EFDs operationalization.
CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction
This chapter deals with the research methodology that includes; study area, research design and methods of data collection that were used in the study. The chapter includes, also, the target population, the sample size, the research instruments for data collection and data analysis procedures.

3.1 The Study Area
This study was done in Ilala Municipality. The area covers 210.1 square kilometres. It is bordered by almost all three Districts in the region which are: Temeke, Kinondoni and Kigamboni. According to National censure of 2012, Ilala Municipal has 1,220,611 people out of which 624,683 are women and 595,928 are men. The economic activities in the Municipal which are both formal and informal in nature include; commerce and industries, agriculture, small scale production and service provision. The area is chosen due to the presence of good number of businesses at all levels and also due to its convenience to the researcher to obtain data as he has been living in the Municipal for more than ten years.

3.2 Research Design
The study adopted a descriptive survey design and used both quantitative and qualitative approaches. The rationale behind the adoption of this approach is based on the fact that it best explores the variables involved in the study. Saunders (2003) supports descriptive survey design, and points out that description depicts the present position of a given situation and that it goes beyond mere collection and tabulation of data. It involves elements of comparison and of relationship of one kind or another. Saunders (2003), further states that, description is ideal as it involves a certain amount of interpretation of the meaning or significance of what is being described. The combination of both qualitative and quantitative approaches allows for flexibility while examining multiple factors in attempting obtaining pertinent information (Kothari, 2004).
3.3 Study Population and Sample Size

3.3.1 Study Population
The population of the study included all 5628 registered taxpayers who are active in Ilala TRA region and are using EFDs in their business operations.

3.3.2 The Sample Size
A sample is defined as part of the study population which is drawn to represent the whole population (Kombo & Orotho, 2013). The information obtained from the sample is used to characterize the population. Thus, the sample is supposed to be a representative of the entire population. According to Best and Kahn (1998), there is no sample size which is the best over the others. Any sample can be acceptable depending on the intention of the study. The sample size depends on such factors as the purpose of the study, research design, data collection methods and the nature of the study population available for the particular research problem (Leady, 1980). Sampling is important as it helps to reduce costs of the study, time management as well as simplifying research process logistical issues. This study used 98 active registered taxpayers and 2 TRA officials who are among those officials involved with VAT. The sample of active tax payers was obtained using the formula:

\[
\text{Sample size} = \frac{\hat{p}}{1 + \hat{p}N(z^2)}
\]

Where:

\[N = \text{Number of VAT active registered tax payers,}\]

\[z = \text{confidence interval (10%)}\]

3.4 Sampling Procedures
The study used purposive and random sampling techniques. The purposive sampling entails the method in which a respondent is selected deliberately basing on specific qualities one holds. The random sampling, as Kothari (2009) reveals, involves random selection of respondents whereby each respondent has equal chances of being selected in the representative sample of the population. The random sampling was used to sample active registered taxpayers who use EFDs in their business operations.
operations. The random sampling was done in two steps. The first step involved sampling one Division out of three Divisions of Ilala Municipal which are Kariakoo, Ilala and Ukonga. These were assigned numbers, each one written on a piece of paper, then folded and put in a box. A colleague was asked to pick one after mixing them thoroughly.. So, Ilala Division was picked to be the area for which the study has to take place.

The second step involved the selection of 98 respondents obtained as a number of sample units to be used in the study from the formula stated in section 3.3.2 above. To obtain respondents, the researcher made research visit to the business centres in the study area and selected a starting point. From the first business centre selection, others were selected on the basis of including the third business centre from the current. The exercise went on until all 98 respondents who freely consented to participate in the research process were obtained. The criteria were the use of EFD in business operations and free consent to participate in the research process.

Purposive sampling was used to sample the TRA officers who deal with VAT and other taxes administration but with more than ten years of work experience as they were thought to have good experience about EFDs and their challenges. The work experience means that they were there when EFDs evolution started in 2010. This made two TRA officers to be sampled.

3.5 Data Collection Techniques
The study employed a combination of techniques which include: questionnaire, interview and documentary review techniques to collect both primary and secondary data to address the research problem.

3.5.1 Primary Data
The primary data were collected using the following instruments:
Questionnaire

A questionnaire is a list of questions in which respondents fill in answers. The questionnaires were used to collect primary data from VAT active but registered taxpayers. The instrument was used to collect information set in line with the specific objectives of the study. According to Naoum (1998), questionnaire is most suitable as it can be used to collect huge information from large sample in a reasonable time. The instrument which contained both closed and open-ended questions removes ambiguities and exerts less pressure on the respondents such that one does not become tired or bored easily. Also, questionnaire responses are easy to analyse.

After meeting with respondents and explaining about the study, its significances and assuring them total confidentiality on whatever information given, the researcher issued questionnaire to respondents. The time was given to pass through questions so that where it was seemed unclear the researcher took responsibility to do so to allow smooth data collection. The dully filled questionnaires were collected after one week.

Interviews

These are set of questions structured to collect information through oral or verbal communications between the researcher and respondents (Kothari, 2004). The method was used to collect primary data from the TRA officials who were dealing with VAT and other taxes administration and was done via face to face modes in a structured manner. The major advantages of interview method are that the interviewer can clarify questions which seem to be unclear as well as asking respondents to give more details on answers to the questions that are particularly important (Frankel & Wallen, 1993). However, interview has a disadvantage of being researcher biased and time consuming. Also, the method may produce different responses which may be difficult to make comparisons between responses and may be difficult to interpret the data collected especially if the interview is unstructured.

The researcher made appointment with TRA officers for interview session. As a taboo, it was necessary to clarify the research purpose, significance and making an assurance to the respondent of total confidentiality of any data given, and that data
were for research purposes only. Afterwards, interview session went on. The data were recorded using researcher’s phone and sometimes taking important notes.

**Observations**

This data collection instrument was used to collect information which could easily be biased. The extent with which EFDs receipts are given, for example, can be hidden. Thus, the researcher decided to take a covert observation system by himself participating as a normal customer in some business centres to verify the same. According to Silverman (1993), observation is used to understand and interpret the meanings and experiences of people. Neuman (2003) notes that, observation involves the systematic description of events and behaviour as well as seeking to uncover, make accessible and reveal the meaning people use to make sense of their everyday lives. Through this method a researcher can gain knowledge of people’s behaviour and events along with the meanings attached to those behaviours (Marshall & Rossman, 1989). Above all, the data collected through this instrument can be used to compliment and verify information from other data collection instruments (Robson, 2002).

3.5.2 **Secondary Data**

The secondary data were obtained through documentary analysis. It involves the perusal of the important documents to collect data (Best & Kahn, 1998). The study reviewed documents such as VAT registers, business records files, journals, National Bureau Statistics (NBS) reports and brochures. The data to obtained from this method supplemented the information obtained from other instruments.

3.6 **Units of Inquiry**

The study used TRA officers who deal with VAT as well as VAT active registered tax payers as units of inquiry. TRA officers provided the information such as the level of VAT compliance, tax collection trends for five years back, the challenges faced by the tax Authority and businesses in using EFDs along with the extent to which the use of EFDs has enhanced revenue collection and business growth. The
active tax payers provided such information as how the use of EFDs has improved their business operations and the challenges faced in using EFDs.

<table>
<thead>
<tr>
<th>Units of inquiry</th>
<th>Information to be Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRA Officers</strong></td>
<td>The level of VAT compliance</td>
</tr>
<tr>
<td></td>
<td>Revenue collection trends for five years back</td>
</tr>
<tr>
<td></td>
<td>Challenges facing the tax Authority and business in using EFDs</td>
</tr>
<tr>
<td></td>
<td>Advantages of EFDs in enhancing revenue and business operations</td>
</tr>
<tr>
<td><strong>VAT tax payers</strong></td>
<td>The advantages of EFDs in enhancing business operations</td>
</tr>
<tr>
<td></td>
<td>Challenges faced in the use of EFDs</td>
</tr>
<tr>
<td></td>
<td>Recommendations on how to enhance EFDs usage</td>
</tr>
</tbody>
</table>

Source: Researcher’s Construct (2019)

3.7 Data Analysis

The data collected by the instruments were both qualitative and quantitative in nature. The quantitative data were collected via questionnaires. After the collection of questionnaires, editing exercise followed. It involved carefully checking the completed questionnaires so that all necessary actions were taken to ensure high quality data are taken (Kent, 1999). So, 98 questionnaires out of 100 distributed were used for analysis after rejecting 2 questionnaires which were not completed well.

After the data from questionnaires were edited, they were then coded. This involved transforming edited questionnaires into machine – readable form (Kent, 1999). The exercise involved gathering and assigning codes to the answers of questionnaires for analysis so that results could be obtained (McDaniel & Gates, 2001). Afterwards, all questionnaires were ready to be entered into computer and analysed using IBM – SPSS software programme according to the research specific objectives and research questions.

Data entry into IBM – SPSS software followed editing and coding processes so that a data matrix to be analysed could be created. Then analysis was done to obtain frequencies and percentages of responses in tabular form for easy interpretations.
According to Corston and Colman (2000), IBM – SPSS is one of the oldest and most popular software programmes used for data analysis.

The qualitative data were analysed using content analysis based on research themes. First of all, all basic statements of interviews from verbal communication were written down clearly. Then they were coded manually (without using any software programme) for better manipulation of data basing on research objectives and questions. Coding involved sifting through the data so as to search for meaning out of it and categorizing in various forms. It aimed at obtaining the most accurate findings (Darlington & Scott, 2002).

3.8 Ethical Consideration

The research clearance to carry out the study was obtained from Mzumbe University Dar es Salaam Campus. This helped to seek permission from the Regional Administrative Secretary (RAS) of Dar es Salaam Region to undertake the research process. In each data collection centre, the researcher met the authority as well as respondents to explain about the study, its purpose and significance so as to allow free participation in data collection process. The total confidentiality was assured to the respondents to raise their confidence in providing the more detailed and needed information.
CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

4.1 Introduction
This chapter presents the general description of the observations and research findings. It also provides the demographic characteristics of respondents, specific findings and their analysis, basing on specifics research objectives and their respective research questions on the efficiency of electronic fiscal devices (EFDs) in enhancing tax revenue collection and business operations in Tanzania, a case of Ilala Municipality.

4.2 Demographic characteristics of Respondents
This study used a total of 100 respondents out of these, 98 (98.0%) of them were traders who were using Electronic Fiscal Devices (EFDs) and 02 (02.0%) of the respondents were TRA officers who were dealing with VAT and other tax related matters and both were males. The traders comprised of 24 (24.5%) females and 74 (75.5%) male respondents.

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>74</td>
<td>75.5</td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

The respondents’ age varied significantly from 20 years to 55 years of age. The results show that respondents with age between 20 years and 25 years, were 8 (08.2%) while those aged 26 to 30 years were 24 (24.5%) and respondents in the age of 31 to 35 years were also 24 (24.5%) in this study. The respondents aged between 36 to 40 years were 26 (26.5%) whereas those with age between 41 to 45 years were 8 (8.2%) respondents and as well as those aged between 51 to 55 years. The TRA officials aged between 46 to 50 years.
Table 4.2: Ages of respondents

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25 years</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>26-30 years</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>31-35 years</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>36-40 years</td>
<td>26</td>
<td>26.5</td>
</tr>
<tr>
<td>41-45 years</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>51-55 years</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Research findings (2020).

The marital status of respondents was such that 82 (83.7%) of them are married and 16 (16.3%) respondents are single.

Table 4.3: Marital status of respondents

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>82</td>
<td>83.7</td>
</tr>
<tr>
<td>Single</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

The education level of respondents ranged from primary school to university. The research findings revealed that 08 (08.2%) respondents have primary education; 24 (24.5%) of them had ordinary level education and 09 (09.2%) have advanced secondary education level. The results show also, that 33 (33.7%) had various college training while 24 (24.5%) had reached a University level of education. Both TRA officers had reached university level.
Accordingly, the research findings revealed that the respondents operated various businesses which differed from each other. From this, it was found that 65 (66.3%) of respondents’ business were sole proprietorship while 24 (24.5%) of them owned partnership business and 09 (09.2%) owned limited companies.

The majority of business operations have been in business for less than 5 years. The research findings show that 57 (58.2%) of respondents operated business for less than 5 years whereas 25 (25.5%) of them had business for 5 to 10 years and 08 (08.2%) respondents have stayed in business for 11-15 years while the same number had business experience for 16 to 20 years.
Table 4.6: Number of Years in Business

<table>
<thead>
<tr>
<th>Experience in business</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 years</td>
<td>57</td>
<td>58.2</td>
</tr>
<tr>
<td>5-10 years</td>
<td>25</td>
<td>25.5</td>
</tr>
<tr>
<td>11-15 years</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>16-20 years</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

However, 40 (42.1%) of businesses operated had been using EFDs for about 4 to 5 years whereas 24 (24.2%) of them had been using EFDs for 1 to 3 years and 34 (34.7%) of respondents had used the machines for less than a year. This implies that a vast majority of traders had experience with EFDs and their challenges.

Table 4.7: Number of Years using EFD

<table>
<thead>
<tr>
<th>EFD Usage Experience</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>34</td>
<td>34.7</td>
</tr>
<tr>
<td>1-3 years</td>
<td>24</td>
<td>24.2</td>
</tr>
<tr>
<td>4-5 years</td>
<td>40</td>
<td>42.1</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

4.3 Topical findings

This section provides findings basing on the specific research objectives and their research questions. The data were collected using a combination of methods namely: questionnaires, interviews, observation and documentary analysis. The first three methods were used to collect primary data and the last method was used to collect secondary data. The study collected both quantitative and qualitative data the quantitative data were categorized, coded and then analysed using the statistical package for social sciences (SPSS) Software. The qualitative data were subject to content analysis basing on the research themes.

The general objective of the study was to assess the efficiency of Electronic Fiscal Devices (EFDs) in enhancing tax revenue collection and business operations in Tanzania. The study focused on Ilala Municipality as a case to be studied. Three
specific objectives and their respective research questions were identified to deal with the general objective. The issues addressed included: the extent to which the adoption of EFDs has enhanced tax revenue collection; the benefits of EFDs in improving business operations and the challenges ahead of adoption of EFDs.

4.3.1 The Extent to which EFDS has enhanced Tax Revenue Collection

The first specific objective was “to assess the extent to which the adoption of EFDS has enhanced tax revenue collection” and the research question associated with this specific objective was “to what extent adoption of EFDs has enhanced tax revenue collection? From these, the study, first tried to find out whether the respondents were aware of the reasons for the introduction of EFDs in tax systems. When responding on the extent to which the automation of the tax payment systems as a reason influenced the adoption of EFDs in tax collection, 65 (66.3%) of respondents strongly agreed, whereas 25 (25.5%) just agreed and only 8 (8.2%) remained neutral. This implies that business operators are aware of the tax systems and the reasons of transformation from the previous systems to the current one.

<table>
<thead>
<tr>
<th>Table 4.8: The automation as the reason for EFDs Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Agree</td>
</tr>
<tr>
<td>Neutral</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

On the other hand, respondents were of the opinion that the old tax payment system was costly to the tax authorities and government. In order to minimize, if not to totally eliminate such costs, the adoption of EFDs was the best solution to the problem. The research findings show that 33 (33.7%) respondents strongly agreed that EFDs were adopted in an attempt to reduce tax collection costs associated with tax collection exercise, while 41 (41.8%) of the respondents just agreed, whereas 16 (16.3%) respondents remained neutral and only 8 (8.2%) of them strongly disagreed.
Table 4.9: Costs Reduction Enhanced the Adoption of EFDs

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>33</td>
<td>33.7</td>
</tr>
<tr>
<td>Agree</td>
<td>41</td>
<td>41.8</td>
</tr>
<tr>
<td>Neutral</td>
<td>16</td>
<td>16.3</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Sources: Research findings (2020)

It was further found that the use of EFDs to collect tax has made tax collectors more responsive than the old conventional methods. The research findings on the question which required to knowing the extent to which one agree or disagree whether EFDs have made tax collectors efficient than conventional methods, 56 (57.1%) respondents strongly agreed; 34 (34.7%) of them just agreed and only 8 (8.2%) remained neutral. The adoption of electronic devices has made the time to search for traders who do not pay the required taxes to be reduced as everything is done online and unnecessary visits by the tax authority officers to business operators almost cut off (URT, 2010).

Table 4.10: EFDs have Made Tax Collectors More Responsive

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>56</td>
<td>57.1</td>
</tr>
<tr>
<td>Agree</td>
<td>34</td>
<td>34.7</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

Accordingly, the research findings show that the adoption of EFDs have made taxation services more assumed than the old systems. The results show that 40 (40.8%) respondents strongly agree that EFD is understandable and easy to use than the old tax system, while 25 (25.5%) of them just agree on the statement and 24 (24.5%) of respondents remained neutral. The results also show that 8 (8.2%) respondents disagree on EFDS to be understandable and easy to use, whereas the same number strongly disagrees.
Table 4.11: EFDs in Tax payment is Understandable and Easy to Use

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>33</td>
<td>33.7</td>
</tr>
<tr>
<td>Agree</td>
<td>25</td>
<td>25.5</td>
</tr>
<tr>
<td>Neutral</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>Disagree</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source*: Research findings (2020)

In the words of Saviono and Phillip (2011), the use of technology-based tax systems aims primarily at enhancing tax compliance by business community. Thus, EFDs help tax authorities to collect taxes from business operators efficiently and to make more traders to pay the same in an efficient and makes more traders to pay the same in an efficient and effective way. It is by this; the expectations of the government and tax authorities is to see tax collection increasing from time to time by motivating more traders to join tax payment systems.

Table 4.12: Domestic VAT Revenue (TZS BILLION) Collected: 2006/07 – 2017/18

<table>
<thead>
<tr>
<th>Year</th>
<th>VAT revenue</th>
<th>% growth</th>
<th>Year</th>
<th>VAT revenue</th>
<th>% growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/07</td>
<td>419.7</td>
<td>-</td>
<td>2012/13</td>
<td>1,155.3</td>
<td>18.0</td>
</tr>
<tr>
<td>2007/08</td>
<td>548.0</td>
<td>30.6</td>
<td>2013/14</td>
<td>1,317.1</td>
<td>14.0</td>
</tr>
<tr>
<td>2008/09</td>
<td>692.6</td>
<td>26.4</td>
<td>2014/15</td>
<td>1,511.9</td>
<td>14.8</td>
</tr>
<tr>
<td>2009/10</td>
<td>728.1</td>
<td>5.1</td>
<td>2015/16</td>
<td>1,840.8</td>
<td>21.8</td>
</tr>
<tr>
<td>2010/11</td>
<td>825.7</td>
<td>13.4</td>
<td>2016/17</td>
<td>2,158.5</td>
<td>17.3</td>
</tr>
<tr>
<td>2011/12</td>
<td>979.1</td>
<td>18.6</td>
<td>2017/18</td>
<td>2,426.3</td>
<td>12.4</td>
</tr>
</tbody>
</table>


The study ought to knowing the extent to which the adoption of EFDs in Tanzania has enhanced tax revenue collection. From this it was found that VAT revenue collected from various goods and services in the period from 2006/07 to 2017/18 grew from Tshs. 419.7 in the year 2006/07 to Tshs. 728.1 billion in the year 2009/10, when the tax collection System without EFDs ended. This marks the 73.5% increase in four years. From 2010/11 when EFDs were first adopted, to 2014/75, the VAT
tax collection grew from Tshs. 825.7 billion in 2010/11 to Tshs.1,511.9 billion in the years 2014/15, this marks 83.1% increase in five years. From the year 2015/16 to 2017/18, the VAT tax collection increased from Tshs. 1,840.8 to 2,426.3 respectively. This marks 31.8% increase in three years. The following table shows the VAT collection from 2006/07 to 2017/18

However, the annual growth rate recorded in various tax period show that there has been a decreasing rate of growth from 30.6% in the year 2007/08 to 5.1% in the year 2009/10 when the none - EFDs era ended. The data, further, show that the annual growth rate increased from 13.4% in the year 2010/11 to 18.6% in 2011/2012. The growth rate dropped from to 18.0% in the years 2012/13 and dropped even further to 14.0% in the year 2013/14. In the year 2014/15 the growth rate rose to 14.8% and continued to grow up to 21.8% in the following year. It then dropped to 17.3% in the years 2016/17 and continued to drop down to 12.4% in the year 2017/18.

Figure 4.1: Trend in Growth of VAT: 2006/07 – 2017/18

The above figure 4.1 shows that VAT tax collection is due to an increasing number of VAT registered taxpayers. The National Bureau of Statistics (NBS) report of 2019 shows that the VAT registered taxpayers increased from 7,723 in the year 2006/07 to 13,253 taxpayers in the year 2009/10 when non-EFDs tax collection ended. This marks the 71.6% increase in the period. The report, further shows that after the introduction of EFDs in tax collection systems, the number of VAT taxpayers rose from 16,848 in the years 2010/11 to 25,908 taxpayers in the years 2014/15 (in five years). This indicates the growth rate of 53.8% in the period. This rate is lower that an equivalent period before the use of EFDs in the period between 2015/2016 to 2017/18 the number of taxpayers rose from 27,235 in the year 2015/16 to 32,141 in the year 2017/18, this marks the growth rate of 18% in three years.

<table>
<thead>
<tr>
<th>Year</th>
<th>VAT revenue</th>
<th>% growth</th>
<th>Year</th>
<th>VAT revenue</th>
<th>% growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006/07</td>
<td>7,723</td>
<td>-</td>
<td>2012/13</td>
<td>21,362</td>
<td>19.6</td>
</tr>
<tr>
<td>2007/08</td>
<td>9,036</td>
<td>17.0</td>
<td>2013/14</td>
<td>24,346</td>
<td>14.0</td>
</tr>
<tr>
<td>2008/09</td>
<td>10,844</td>
<td>20.0</td>
<td>2014/15</td>
<td>25,908</td>
<td>6.4</td>
</tr>
<tr>
<td>2009/10</td>
<td>13,253</td>
<td>22.2</td>
<td>2015/16</td>
<td>27,235</td>
<td>5.1</td>
</tr>
<tr>
<td>2010/11</td>
<td>16,848</td>
<td>27.1</td>
<td>2016/17</td>
<td>29,561</td>
<td>8.5</td>
</tr>
<tr>
<td>2011/12</td>
<td>17,860</td>
<td>6.0</td>
<td>2017/18</td>
<td>32,141</td>
<td>8.7</td>
</tr>
</tbody>
</table>


The study sought to know the extent to which the adoption of EFDs has enhanced tax collection in Ilala Municipal. From this, the study found that before the introduction of EFDs, tax collection rose from Tshs. 95,615.00 in the year 2005/06 to Tshs. 188,672.85 in the year 2009/10. This marks the growth rate of 97.3% in the period. Five years later after the introduction of EFDs, the tax collection rose to Tshs. 489,106.60 in the year 2014/15, which marks the growth rate of 112.5% in five years period. Moreover, from the year 2015/16 tax collection rose from Tshs. 567,637.26 to 624,709.77 in 2016/17 but dropped drastically to 599,835.16 in the year 2017/18 then rose again to 795, 150.35 in the year 2018/19.
Table 4.14: Trend in TAX collection in Ilala Municipal: 2006/07-2018/19

<table>
<thead>
<tr>
<th>Year</th>
<th>VAT revenue</th>
<th>% growth</th>
<th>Year</th>
<th>VAT revenue</th>
<th>% growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/06</td>
<td>95,615.00</td>
<td>-</td>
<td>2012/13</td>
<td>369,555.90</td>
<td>24.4</td>
</tr>
<tr>
<td>2006/07</td>
<td>114,291.29</td>
<td>19.5</td>
<td>2013/14</td>
<td>484,622.59</td>
<td>31.1</td>
</tr>
<tr>
<td>2007/08</td>
<td>157,932.86</td>
<td>38.2</td>
<td>2014/15</td>
<td>489,106.60</td>
<td>0.9</td>
</tr>
<tr>
<td>2008/09</td>
<td>178,059.29</td>
<td>12.7</td>
<td>2015/16</td>
<td>567,637.26</td>
<td>16.1</td>
</tr>
<tr>
<td>2009/10</td>
<td>188,672.85</td>
<td>6.0</td>
<td>2016/17</td>
<td>624,709.77</td>
<td>10.1</td>
</tr>
<tr>
<td>2010/11</td>
<td>230,117.49</td>
<td>22.0</td>
<td>2017/18</td>
<td>599,835.16</td>
<td>-4.0</td>
</tr>
<tr>
<td>2011/12</td>
<td>296,966.20</td>
<td>29.0</td>
<td>2018/19</td>
<td>795,150.35</td>
<td>32.6</td>
</tr>
</tbody>
</table>

Source: TRA Ilala (2019)

From the table above, it can be observed that, although that tax collection figures seem to be increasing in most cases, the growth rate is not promising.

4.3.2 Benefits of EFDs in Improving Business Operations

The second specific objective of the study was to find out the ways in which the adoption of EFDs has improved business operation and its corresponding research question was “in what ways the adoption of EFDs has improved business operations?”. The research findings show that, the use of EFDs has made the tax payment more reliable than before the adoption. When responding to the question which required to knowing to which they agree or disagree that EFDs has made tax payment reliable, 41 (41.8%) respondents strongly agreed, while 49 (50.0%) respondents just agreed and only 08 (08.2%) remained neutral. No any respondent disagreed on the statement. The reliability lies in the fact that tax is calculated basing on sales information obtained from business operators who issue EFDs receipts. Thus, traders’ own information of sales makes what has to be paid as tax and not tax authority estimation.

Table 4.15: The use EFDs is More Reliable in tax payment

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>41</td>
<td>41.8</td>
</tr>
<tr>
<td>Agree</td>
<td>49</td>
<td>50.0</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research findings (2020)
On the other hand, EFDs have been found to make tax service more accessible. This was revealed by respondents, when responding to the question which required to knowing the extent to which they agree or disagree that EFDs have made tax services more accessible or not, the results show that 40 (40.8%) respondents strongly agree on the statement; 42 (42.9%) of respondents just agreed, whereas 8 (8.2%) were neutral and the same number of respondents disagreed.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>40</td>
<td>40.8</td>
</tr>
<tr>
<td>Agree</td>
<td>42</td>
<td>42.9</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Disagree</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research Findings (2020)

In an interview with TRA officers, on how EFDs has improved business operations of tax payers, they were of the view that, business people could easily keep their business records as well as tracking sales stock and purchases. The use of EFDs help taxpayers to formally manage their business thereby complying with all legal requirements as well as keeping and sharing proper and correct information with tax authorities. Through this business people minimizes compliance and tax risks to great extent.

“...Although some traders are worried of using EFDs, the machines are useful to their businesses. EFDs can be used to keep business records up to five years; enable taxpayer to send sales report to TRA easily without physical visits as well as giving the business person an opportunity to track sales, Stock and purchases easily” they stated
4.3.3 Challenges Facing the Adoption of EFDs in Tax Revenue Collection and Business Operations

The third specific objective was to find out the challenges facing the adoption of EFDs in tax revenue collection and business operations; and its respective research question was “what are the challenges facing the adoption of EFDs in tax revenue collection and business operations?”. From these, it was found that the cost of purchasing the EFDS machine is the critical challenge faced by taxpayers. When responding to the question which enquired to know the extent to which one agree or disagree on high cost of purchasing device is the challenge in the implementation of EFDS in Tanzania, 73 (74.5%) respondents strongly agreed, while 25 (25.5%) of them just agreed. This implies that all respondents were of the opinion that high cost of purchasing EFD Machines poses the challenge.

**Table 4.17: Cost of Purchasing EFD Machines**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>73</td>
<td>74.5</td>
</tr>
<tr>
<td>Agree</td>
<td>25</td>
<td>25.5</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** Research Findings (2020)

Another challenge mentioned by respondents was lack of education on the use of EFDs. This was revealed by the respondents when responding to the question required to knowing the extent to which one agree or disagree that lack of education is a challenge in EFDs adoption in tax payments systems. The research findings show that 32 (32.7%) respondents strongly agree on the statement, whereas 42 (42.9%) of them just agree and 24 (24.4%) remained neutral.

**Table 4.18: Lack of Education on EFDs**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>32</td>
<td>32.7</td>
</tr>
<tr>
<td>Agree</td>
<td>42</td>
<td>42.9</td>
</tr>
<tr>
<td>Neutral</td>
<td>24</td>
<td>24.4</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Source:** Research findings (2020)
Accordingly, the research findings revealed that network error and system breakdown are among the challenges mentioned by respondents in the use of EFDs when responding to the question which enquired to know the extent to which they agree or disagree on the statement that system breakdown and network error are the challenges limiting EFDs usage. 49 (50.0%) respondents strongly agree, 24 (24.5%) of them just agree while 25 (25.5%) remained neutral. The system breakdown and network error limits sending of sales report efficiently.  

**Table 4.19: System Breakdown and Network Error of the system**  

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>49</td>
<td>50.0</td>
</tr>
<tr>
<td>Agree</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>Neutral</td>
<td>25</td>
<td>25.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Research findings (2020)*  

It was further found that, personal attitude posed challenges in the implementation of EFDs in Tanzania. This was revealed by respondents when it was enquired to know the extent to which they agree or disagree that taxpayers’ personal attitudes pose the challenge in the implementation of EFDs in Tanzania. From this, it was found that 56 (57.1%) of respondents strongly agree on the statement, whereas 17 (17.3%) of them just agree and 8 (8.2%) respondents were neutral but 17 (17.3%) of them disagreed.  

**Table 4.20: Personal Attitudes Pose Challenges**  

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>56</td>
<td>57.1</td>
</tr>
<tr>
<td>Agree</td>
<td>17</td>
<td>17.3</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Disagree</td>
<td>17</td>
<td>17.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>98</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Source: Research findings (2020)*  

In addition to the above, the researches findings show that, taxpayers lack trust in EFDs as such they opt to ignore their usage. In responding to the question which was asking whether they agree or disagree that lack of trust in EFDs among traders
is a challenge towards the adoption of EFDS I tax systems, 49 (50.0) respondents strongly agreed; 24 (24.5%) just agree 08 (08.2%) strongly disagree.

Table 4.21: Lack of Trust Pose the Challenge

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>49</td>
<td>50.0</td>
</tr>
<tr>
<td>Agree</td>
<td>24</td>
<td>24.5</td>
</tr>
<tr>
<td>Neutral</td>
<td>17</td>
<td>17.3</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>8</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Research findings (2020)

In an interview with several traders, they claimed that EFDs provide the sales volumes. The sales volume is the one used to calculate the amount of tax to be paid. These calculations of what is to be paid do not consider costs incurred by the trader in operating business. Thus, most traders decide to escape the usage of EFDs in order to compensate the costs of business which is not considered in tax calculations.

“... you see brother; we incur a lot of costs in businesses. We have bank loans; we pay various bills and other costs. But the tax calculations do not consider the costs. Does not even consider the capital with which the business is based. This is not fair” they furiously stated.

Another challenge given by an Indian trader was the corruption behaviour of TRA Officers who do tax – compliance audits. These officers are claimed to target Indians so that they fall into their traps with intentions to be bribed. He gave one of the incidents when the TRA officer came in his shop and asked for Azam energy drink and seems to be in hurry. Just after paying he disappeared. After few minutes came back showing identity card as TRA official to claim of inappropriate behaviour of not issuing receipts. The behaviour displayed limits the efforts to enhance tax collection.

“... it is like they target Indian traders so that they could be bribed. One of TRA officers came in my shop demanded Azam energy drink and paid Tshs. 1,000/- and he was in hurry. Just after being given
the drink he disappeared for a while. He came few minutes later showing his ID. I was troubled for not issuing receipts. This is not proper”. He claimed.

The study also found that, despite challenges faced by traders, the tax authority face challenges as well. The data collected from TRA officers in Ilala indicate that; lack of details while issuing receipts; fading of EFDs receipts and frequent incorrect receipts pose the challenges to the authority this leads to improper tax conclusion, hence limits the efficiency in tax collection.

“... relying on EFDs only for tax assessment may lead to wrong conclusion of tax assessment by both parties. This is due to a number of challenges ahead of usage of EFDS. For example, there is fading of EFDS receipts and improper issuing of receipt” he insisted.

On the above findings, the researcher several times observed several trades selling items without issuing receipts until when demanded. In one of the shops there were prices for items if a customer need receipts and prices when a customer do not need receipt. Obviously, the prices with receipts are higher than when an item is sold without receipt. Most of customers would prefer the lower price and wave away receipts. In so doing tax collection will suffer.

Finally, the study found that the tax authority had dealt with challenges to some extent. When responding to the question which required to knowing how TRA addresses the identified challenge, TRA officers stated that, some technical challenges are reported to the Authority’s technical experts, while those which require law enforcement are directed to the legal departments. They also stated that, consultative meetings with taxpayers are there although on an individual case.

“... TRA deal with challenges depending on their nature, for example, when it is noticed that a particular trader issues receipts which lack details or are incorrect, the authority gives the notice of offences to him/her subject to Section 86(c) of Tax Administration Act of 2015. In case of Network error and system breakdown, the
problem is reported to the IT experts within 24 hours after their detection” they stated.

4.4 Chapter Summary

This chapter presented the research findings and their analysis of the study to assess the efficiency of EFDs in enhancing tax revenue collection and business operations in Tanzania: a case of Ilala Municipal in Dar es Salaam region. The research findings revealed that the adoption of EFDs in tax systems in Tanzania has only helped in enhancing tax collection in nominal terms, but the growth rate of the tax revenue has never attained any predictable pattern. Also, the study has found that, EFDs have helped traders mainly in record keeping of their sales information for a period up to five years. However, the challenges facing the adoption of EFDs have been determined to include; cost of purchase for the case of traders and issuing of fake or not issuing EFDs receipts at all by Traders. The challenges faced limits the efficiency in tax compliance hence ruin the tax revenue collection.
CHAPTER FIVE
DISCUSSION ON FINDINGS

5.0 Introduction
This part discusses data presented in the previous chapter four and based on data obtained through questionnaires, interviews and documentary review. The discussion below is based on the previous literature reviewed in relation to the findings on research three specific objectives. It also presents the researcher’s opinions based on empirical studies reviewed.

5.1 The extent to which the adoption of EFDs has enhanced tax revenue collection
The researcher investigated the extent to which the adoption of EFDs has enhanced tax revenue collection in Tanzania. The findings indicate that the introduction of EFDs has enhanced tax revenue collection among business operators. This finding is similar to the argument by Chege et al. (2015), which argues that automation facilities in tax collection improve efficiency of tax controls or tax evasion and secure revenue collection. This is in line with VAT tax Act, Cap 148, which states that the introduction of EFDs aimed at combating revenue leakages or tax evasion by ensuring tax payers keeps proper books of accounts. The fiscal machines, at least guarantee that the entered records are not tempered with, as they are electronically captured and stored in the cyber space for security of tax records.

This finding is similar to the study conducted by Kira (2016), which evaluated the taxpayer’s perceptions on the use of Electronic Fiscal Devices (EFDs) in revenue collection in Dodoma Region. The study analysed the benefits of using EFDs in revenue collection among others. The study adopted the survey research design showed that the majority of taxpayers’ demonstrated advantages of using EFD machines in revenue collection. However, the use of EFDs faced various problems. The study recommends that Tanzania Revenue Authority (TRA) to conduct trainings and workshops with taxpayers on EFDs application, to provide incentives to encourage taxpayers’ adoption of EFDs and to ensure sensitization programmes are done to raise taxpayers’ awareness on EFDs.
However, this finding is contrary to study conducted by Kapera (2017) who assessed the effectiveness of Electronic Fiscal Devices (EFDs) in tax collection in Tanzania; a case of Arusha City using both descriptive and exploratory designs. In this study, it was found that before introducing EFDs in Tanzania, revenue obtained from VAT registered taxpayers was growing; but after the introduction of EFDs nothing significant was evidenced in VAT revenue collection. This was against the reasons for adopting EFDs machine which included, among others, raise VAT collection. The study recommended increase of education, awareness and motivation on use.

Similar to Kapera’s findings and contrary to Penduka (2015) who did a study to assess the efficiency of Electronic Fiscal Devices (EFDs) in improving revenue collection in selected companies in Harare using the case of the Fiscal Electronic Tax Registers. The research adopted a combination of both desk and field research designs. The findings of this study showed that, Fiscal Electronic Tax Registers has increased the revenue base. However, the devices have not improved on the VAT collections since the adoption of EFDs.

5.2 The ways in which the adoption of EFDs has improved business operations

The researcher tried also to investigate the ways in which the adoption of EFDs has improved business operations. The findings indicated that the adoption of EFDs has improved the ways of doing business operations. In the similar study, Kira (2016) evaluated the taxpayer’s perceptions on the use of Electronic Fiscal Devices (EFDs) in revenue collection in Dodoma Region. The study analysed the benefits of using EFDs in revenue collection. The study adopted the survey research design showed that the majority of taxpayers’ demonstrated advantages of using EFDs machine in revenue collection. The study findings revealed that EFDs has reduced the time it takes to prepare sales reports, secure tax information for auditing purpose and transaction as well as ensuring tax rate to be paid by the taxpayers apart from some faced challenges. The study recommends Tanzania Revenue Authority (TRA) to conduct trainings and workshops with taxpayers on the benefits of EFDs, to ensure motivations of taxpayers in adaptation of EFDs.
It can be argued that the study above is similar to this one on design and methods except on focus, and location. This similarity may have accounted on the similarity of findings on how EFDs may have improved business operations like in Dodoma except that Ilala has a different business setting from that of Dodoma where Kira (2016) conducted the study.

5.3 The challenges facing the adoption of EFDs in tax revenue collection and business operations.
The researcher also investigated the challenges facing the adoption of EFDs in tax revenue collection and business operations. The findings indicate that adoption of EFDs encountered different challenges in tax collection and business operations. These challenges include: high cost of buying the EFD machines incurred by traders, lack of awareness training and education to traders and other stakeholders, regular and persistent system breakdown and network errors, and lack of trust on the sales volume records against costs of trading.

This finding is similar to the findings of the study conducted by Kira (2016) that evaluated the taxpayer’s perceptions on the use of Electronic Fiscal Devices (EFDs) in revenue collection in Dodoma Region. The study analysed the benefits of using EFDs in revenue collection; the perceptions of taxpayers towards the use of EFDs and challenges towards the use of the EFDs in revenue collection. The study which adopted the survey research design showed that the use of EFDs faced various problems which include: high prices of EFD machines, faint fiscal tax invoices, and EFD’s network problem, lack of taxpayer’s education EFDs applications and few suppliers of EFDs machines. The study recommends Tanzania Revenue Authority (TRA) to conduct trainings and workshops with taxpayers on EFDs application, to provide incentives to encourage taxpayers’ adoption of EFDs and to ensure sensitization programmes are done to raise taxpayers’ awareness on EFDs.

This finding is also similar to that found by Kapera (2017) in his study that assessed the effectiveness of Electronic Fiscal Devices (EFDs) in tax collection in Tanzania; a case of Arusha City using both descriptive and exploratory designs. In this study, it was found that the implementation of EFDs faced a number of challenges which
include: high cost of purchasing the devices and lack of education on the side of taxpayers concerning the use of FDs. The study recommended review of purchasing price and maintenance costs downwards, improvement on system or network breakdown, increase of education, awareness and motivation on use.

In a similar study, but with a different setting and focus, Penduka (2015) did a study to assess the efficiency of Fiscalised Electronic Devices (FEDs) in improving revenue collection in selected companies in Harare using the case of the Fiscal Electronic Tax Registers. The study noted some challenges that affect tax compliance, to include such factors as; resistant to change, reluctance by tax payers to embrace fiscalisation, lack of knowledge, increased administration costs and lack of capacity as well as increased number of informal traders who do not offer receipts. Other challenges include; few suppliers of the devices, unrealistic deadlines, and higher penalties. Other challenges include; few suppliers of the devices, unrealistic deadlines, and higher penalties and also the system was not user-friendly and compatible with other devices. In addition to that, FEDs were found advantageous in a number of ways including; improving internal accountability, management and control of business by recording and storing all sales without manipulation.

It can be argued those studies were similar to this study but differed in location. However, both the study findings are similar. This similarity on design may have accounted on the similarity of findings despite the fact that Ilala has different business setting from those of Dodoma and Arusha where Kira (2016) and Kapera (2017) conducted the study.

5.4 Other challenges
From the findings above and reviewed literature is indicated that effective EFD program is affected by other different factors depending on the prevailing socio-economic conditions of the given region or country. The following factors are very common in various countries and have been regarded as major determinants of success or failure of a given EFD program: increased penalty on non-use of EFD machines, psychological behaviour, and the tax administration. Interviews indicated that a combination of these factors hindered the adoption of EFDs.
CHAPTER SIX
SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction
This chapter provides the summary, conclusion of this study which assessed the efficiency of Electronic Fiscal Devices (EFDs) in enhancing tax revenue collection and business operations in Tanzania. The study focused on Ilala Municipal as a case study.

6.2 Summary of findings
The study assessed the efficiency of EFDs in enhancing tax revenue collection and business operations in Tanzania: a case of Ilala Municipal in Dar es Salaam region. The study employed a descriptive survey research design as well as applying both quantitative and qualitative approaches. The study was guided by three specific objectives. The major themes covered under these objectives are: the extent to which the adoption of EFDs has raised the tax revenue collection; the benefits of EFDs in improving business operations; and the challenges ahead of the adoption of EFDs. The data were collected using questionnaires, interviews, observation and documentary analysis. The research findings show that automation of tax services, cost reductions and enhancing tax collection services are among the reasons for the adoption of EFDs in tax systems in Tanzania. Also, the research findings indicate that, tax revenue seems to be increasing year after year, although the growth rate of tax collection is not linear since the adoption of EFDs.

The study, further noted that most of traders do not issue EFD receipts promptly, thus, the reported sales are not representative of the actual sales at the selling centres. In addition to that, EFDs have been found to be reliable in terms of tax calculation as the tax is based on the reported sales by the trader and the tax services are accessible. The most mentioned benefit of EFDs is record keeping of up to five years.
However, the adoption of EFDs has been faced with challenges from both, taxpayer and the tax authority. The cost associated with the purchase of the EFD machine is the first and foremost challenge mentioned, followed by lack of trust with EFDs. The network error and system breakdown as well as lack of education on the benefits of using EFDs were identified to pose the numerous challenges in EFDs adoption in Tanzania. In addition to these challenges, personal attitudes towards tax payment, tax authority officers’ corrupt behaviour and tax to be calculated basing on sales volumes without considering costs of business are other challenges towards EFD adoption and tax collection in Tanzania. Finally, on the part of tax authority, lack of details while issuing receipts; pose challenges which lead to improper tax calculations, hence limits the efficiency in tax collection.

6.3 Conclusion
From the introduction, literature review, research methodology and findings of this study it is concluded that although the implementation of the adoption of EFDs seems to increase the tax revenues in Ilala Municipal, the expected growth rate has not yet achieved. This can be evidenced with the data of growth rate which do not show progressive increase year after the year. Also, the adoption of EFDs has not enhanced business operations to sustainable level due to the challenges facing the implementation of the same. This calls for the formulation of effective strategies to eliminate challenges identified so as to enhance tax compliance which in turn will raise the revenue collection in the Municipality.

6.4 Recommendations
Following the findings of the study and conclusion above, the following recommendation are made to address challenges facing the implementation of the adoption of EFDs in tax systems in Tanzania in general, and Ilala Municipal in particular.

The tax authority should put more emphasis on awareness programmes so that taxpayers are knowledgeable on the benefits of using EFDs in their business operations and tax payments. Tax audits should be done regularly in covert systems
to determine the extent to which receipts are being issued so as to eliminate the problems of not issuing receipts. This should be followed by punishment for those caught in malpractices. Also, the tax authority should collaborate with business association in each step of tax reforms in order to raise trust in decisions reached on taxation.

It was found that, in most cases the only benefit the business person attain out of the adoption of EFDs is the record keeping. However, the records involved are sales information only and do not show the costs associated with the purchase of the item and other implicit or explicit costs. This has made the tax calculations to not be realistic to the traders. It is recommended therefore that, tax authority to meet with business community and find the means to include costs of business so that tax should be calculated basing on the actual gains (profits) obtained in the particular sales volume. This will raise tax compliance, hence increase tax collection.

The study found that, the cost of purchase of EFD machine has been problematic to most business people. It is recommended, that the tax authority and the government should find the means to subsidize the cost of EFD machines or wave away importation costs of the devices. Also, concerning the issues of system breakdown and network error which limit the submission of Z – report have been found to be a challenge, it is recommended that, the tax authority should find the means to go for other technological options which they do not face network error and easy to be used by taxpayers. Finally, the corruption behaviour of some of TRA officers has been identified as a challenge to the traders. So, concerning these behaviours of some of TRA officers, it is recommended that, the tax authority should collaborate with traders and, if possible, PCCB should be involved to find out the claims so that those involved be punished accordingly.

6.5 Areas for Further Research

The study assessed the efficiency of EFDs in enhancing tax revenue collection and business operations in Tanzania: a case of Ilala Municipal in Dar es Salaam region. The study found that the adoption of EFDs in taxation systems in Tanzania in general
and in Ilala Municipal in particular, has increased the tax revenues in nominal terms, but the growth rate has been not promising. The study used 98 registered tax payers who were using EFDs in their business operations and 2 TRA officers who were dealing with tax related matters. So, for further studies, the study recommends for the comparative study on the level of EFDs adoption and compliance among rural and urban areas to determine the difference or similarity in compliance trends between the two locations. The current study was done in Ilala Municipal in Dar es Salaam Region. Moreover, it recommended that, the same study be done in other Municipalities in the region and other regions by using large sample. The study to design a technological based Model on how fiscalization in tax authorities can be enhanced is also recommended.
REFERENCES


improving revenue collection in selected companies in Harare: The case of the Fiscal Electronic Tax Registers. Unpublished Master Degree in Public Administration, Zimbabwe University


APPENDICES
Appendix I
Questionnaire the Tax Payers Respondents

SECTION A: Respondent’s Personal Information

1. Gender:
   Male (   ) Female (   )

2. Age:
   Below 20 years (   )
   20 - 25 years (   )
   26 – 30 years (   )
   31- 35 years (   )
   36 – 40 years (   )
   41 – 45 years (   )
   46 – 50 years (   )
   51 – 55 years (   )
   Above 55 years (   )

3. Marital Status:
   Married (   )
   Single (   )
   Widow/Widower (   )

4. Education Level:
   Primary (   )
   O – Level Secondary (   )
   A – Level Secondary (   )
   College (   )
   University (   )

5. What is the nature of your business?
   Sole Proprietorship (   )
   Partnership (   )
   Company (   )
6. For how long have you been in business?
   Less than 5 years  (  )
   5 – 10 years     (  )
   11 – 15 years    (  )
   16 – 20 years    (  )
   21 – 25 years    (  )
   Above 25 years   (  )

7. For how long have you been using EFD?
   Less than 1 year  (  )
   1 – 3 years      (  )
   4 – 5 years      (  )
   Above 5 years    (  )

SECTION B: Questions Basing on Specific Objectives
1. In your own opinions to what extent do you agree on the variables given on the reason influenced TRA to introduce EFDs in tax collection.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Variables</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Standardization of the tax payment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Automation of the tax payment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Due to the media influence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>Computerization of tax collection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>Integration of the tax system with other government systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi</td>
<td>To bring innovation in the tax payment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii</td>
<td>Reducing tax collection costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. To what extent do you agree or disagree on the following advantages and/or benefits brought by EFD in the tax collection system in Tanzania?

<table>
<thead>
<tr>
<th>s/n</th>
<th>Variables</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>Electronic payment of tax has made tax collectors more responsiveness than conventional method (responsiveness)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Electronic devices has make taxation service more assured than conventional method (assurance)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Electronic tax payment is understandable and easy to use than conventional method (conformation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>The use of electronic payment is more reliable in tax payment thank conventional method (reliability)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>EFDs has made tax service more accessibility (accessibility)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii</td>
<td>EFDs has made tax service more availability (availability)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. To what extent do you agree or disagree on the following pose challenges in implementation of EFDs in Tanzania.

<table>
<thead>
<tr>
<th>s/n</th>
<th>Variables</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>High cost of purchasing the devices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii</td>
<td>Lack of education on the use of EFDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii</td>
<td>Breakdown of the system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv</td>
<td>Lack of motivations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>Lack of trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi</td>
<td>Personal attitudes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Lastly, what do you think should be done in order to improve usability of EFDs in Tanzania revenue collection?

5. In what ways the use of EFDs has helped you in business operations?
Appendix II

Interview Guide for TRA official

1. How long have you been employed by TRA?


<table>
<thead>
<tr>
<th>Year</th>
<th>Expected</th>
<th>Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014/2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015/2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016/2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017/2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018/2019</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. To what extent the levels of VAT compliance have been attained since the introduction of EFDs by giving the trend of registered VAT tax payers.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered No.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. What are the challenges faced in use of EFDs?

5. In what ways EFDs improves business operations of tax payers?

6. What are the challenges posed by EFDs machines to both TRA and tax payers?

7. What should be done to encourage tax compliance?