

**AN ASSESSMENT OF THE EFFECTIVENESS OF ELECTRONIC
TAX REGISTERS IN PROCESSING OF VALUE ADDED TAX
RETURNS: A CASE STUDY OF REGISTERED VAT TAXPAYERS
IN KISII TOWN, KENYA**

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CM11 / 0261 / 05

**A Research Project Report submitted to the Board of Post Graduate in
partial fulfillment for the Award of a Master of Business Administration
Degree of Egerton University.**

SEPTEMBER 2007

DECLARATION AND RECOMMENDATIONS

DECLARATION

I, Bernard M. Obongo, hereby do declare that this research project is my original work and has not been presented for the award of any degree in any university.

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DEDICATION

To my wife, Peris B. Matibe and my kids; Dylan and Jacky.

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The completion of my Master of Business Administration degree depends on the contributions from several people. I would like to show them my appreciation: My supervisors; Mr. Lumumba Martin and Dr. Machogu Clifford, for their interest as well as their willingness to support and share their knowledge and intellectual advice. My mama Pacificah Nyakerario Obongo who taught me the virtue of hard work and putting up a hard fight even when chances of success are too slim. My wife Peris, Son Dylan and Daughter Jackline - You deserve a special Thank for encouraging me to work hard even in times of despair, as well as your co-operation and understanding for the deserving precious time I denied you while undertaking this course. In addition, I would like to thank all the Business Managers who participated to make this research a success. I will also like to acknowledge the various contributions made by my lecturers especially Mr. Ngacho and Mr. Mamati, my colleagues; the / 05 MBA class. I will also not forget to thank Mr. Jackan Mwawasi; Training Co-coordinator - KRATI for supporting me in many different ways while finalising this research. Above all, I owe it all to God Almighty.

ABSTRACT

The main purpose of this study was to assess the effectiveness of Electronic Tax Registers (ETRs) in the processing of Value Added Tax returns. The population under study comprised of 98 VAT registered taxpayers in Kisii town, which was stratified into; service providers, wholesalers & large scale retailers and supermarkets. The main instrument of collecting primary data was the questionnaires while secondary data was obtained from the KRA regional office. Analysis of data was mainly done using descriptive statistics. Data was collected from 78 registered VAT taxpayers in Kisii town. The respondents were senior, middle level and lower level managers. Out of the 78 registered VAT taxpayers to whom the questionnaires were administered, only 68 responded. This gives a response rate of 87% percent. Data analysis tools used in the research were Excel and SPSS and data was presented in form of tables and graphs. Based on the results from data analysis and findings of the research, one can safely conclude the following; First, Kenya has witnessed significant changes in many aspects of its economy over the last four decades, but like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries. From the research data, most businesses (91%) have acquired ETR machines; an indication that most businesses in Kisii town have complied with the VAT requirements in Kenya. Secondly, the timely filing of the monthly VAT returns is attributed to many factors. ETR is one of the factors. Most businesses indicated that timely filing of VAT returns was attributed to the adoption of the ETR machine. The use of ETR machines has also led to improved sales audit for the business. Thirdly, it was found out that ETRs have enhanced revenue collection resulting from sound sales and stock audits. Lastly, to evaluate the effectiveness of ETRs in filing VAT Returns at regular intervals, it was found that the use of ETRs was not a waste of funds and has assisted the business in many ways. The findings of this research project will assist the Kenya Revenue Authority look for ways of improving the processing of VAT returns as well as come up with other cost effective methods which taxpayers can use in processing their VAT returns

LIST OF ABBREVIATIONS

KRA	-	Kenya Revenue Authority
VAT	-	Value Added Tax
ETRs	-	Electronic Tax Registers
IMF	-	International Monetary Fund
ROM	-	Read Only Memory
PIN	-	Personal Identification Number
CPA	-	Certified Public Accountant
ICT	-	Information Communication Technology
WCO	-	World Customs Organisation
GOK	-	Government of Kenya
FAD	-	Fiscal Affairs Department
TRA	-	Tanzania Revenue Authority
TIN	-	Taxpayer Identification Number
GOT	-	Government of Tanzania
ECR	-	Electronic Cash Register

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

A lot of debate has been going on in the country between business owners and the Kenya Revenue Authority (KRA) on the adoption of Electronic Tax Registers. Electronic Tax Registers were introduced by KRA to replace the manual paper system of remitting VAT returns that was considered inefficient and straining.

To enhance the accountability systems for Value Added Tax, the Kenya Revenue Authority (KRA) has spearheaded the introduction of the **Electronic Tax Registers** and **Electronic Signature Devices**. These devices offer unique benefits to traders and the Revenue Authority alike by recording transaction data in such a manner that it cannot be deleted. The Government of Kenya on the other hand allowed businesses to offset the cost of the ETR installation against the input VAT as well as training of traders on the use and benefits of those devices.

Kisii town is among the fast growing commercial towns in Western Kenya. It is located 300 miles away from the country's capital city Nairobi along the Nairobi Isebania road. Major businesses that are carried out in the town range from large scale businesses, service provision industries, processing industries to small scale businesses. Majority of the traders are registered taxpayers and have adopted the Modern Electronic Tax Registers. Initially the tax payers used to file their VAT returns using prescribed forms that are provided by KRA.

This study aimed at assessing in detail the effectiveness of ETRs in processing of VAT returns by taxpayers that were introduced to replace the earlier manual system of VAT processing. The study also tried to establish if there was any increase or reduction in costs incurred in the preparation and remittance of VAT to the Kenya Revenue Authority with the introduction of the electronic devices. The study was to find out if there was any time saved in the process and if both the taxpayer and KRA were enjoying these advantages.

Variables explored in this study include; time of processing VAT returns, problems encountered in processing of VAT returns using ETRs, financial resources that go into the processing, remittance and management of the VAT returns and improve public revenue capture through more accurate data entry, operational expenses, tax agencies expenses, costs of processing refund claims, costs of inspection and audit by the KRA to establish evaders and defaulters, filing of tax returns systems, costs that are incurred in processing

tax refunds, costs of auditing sales records, the cost of maintenance of the Electronic Tax Registers, the cost of training staff to handle or rather operate the machines, the cost of time value of money that was used in purchasing of the tax registers until such a cost is finally offset by the Kenya Revenue Authority as well as the cost of replacing such machines and the learning curve effect of using the devices. Time taken to process the VAT as well as the extra labour that was required to sort and analyse the sales books to come up with the VAT values by separating the VATable from the non VATable items as well as the Zero rated ones.

The Kenya Revenue Authority focuses on effective methods of revenue collection so as to meet the country's budget revenue targets. The tax base in Kenya, as in most sub-Saharan African countries, is extremely narrow. So far, attempts to increase tax revenue have focused on closing the 'taxation gap' and expanding the tax base. The main policies recommended by the IMF have led to trade liberalization, the transition from a sales tax to a system of VAT. (IMF, Nov.2005). Such policies have been adopted by most African countries with Kenya being no exception.

Kenya has witnessed significant changes in many aspects of its economy over the last four decades. One of the striking characteristics of Kenya is that unlike many other Sub-Saharan countries today, it is a high tax-yield country with a tax-to-GDP ratio of over 20 per cent. Kenya is able to finance a large share of its budget, while external donor finances are used to cover a much smaller share than in other countries of the region. This is mainly because of the efforts made in overcoming problems affecting its tax system. Like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries (Karingi, Wanjala, Dec, 2005). This was also confirmed by President Mwai Kibaki's (2006) speech during Kenyatta day celebrations. Most scholars in finance have ignored focusing on the costs to traders of the tax systems that are now used in the processing and remittance of tax returns to revenue collection institutions. Not to mention the modern electronic systems like the Kenyan ETR which formed the basis of this study.

It was in this regard therefore that the Kenyan revenue authority had tried to move from a system; with rates and structures that are difficult to administer and comply with; that are unresponsive both to growth and discretionary tax measures hence offering low tax productivity; that raise little revenue but introduce serious economic distortions; that provide opportunities for differential treatment of individuals and businesses in similar circumstances, and that are selective with regard to tax administration and enforcement to

an electronic system (ETR) that should be categorized as; Efficient, fair and administratively feasible both for the specific tax instruments and for the entire tax regime.

Looking at how far Kenya's tax system had adopted the modern Electronic devices and how its benefits had differed from the previous system of effecting tax returns on costs that are incurred by the small scale traders was an area whose outcome (s) was quite desired. There was little literature available on the introduction and adoption of Electronic Tax Registers in Kenya as well as in other developing countries. Developed countries like the United States of America and Canada make use of electronic filing and electronic commerce to collect taxes from the taxpayers.

1.2. Statement of the Problem

The adoption of Electronic Tax Registers by traders as a means of processing VAT returns has been a court battle for a long time. Traders claimed that there were punitive operating expenses that the KRA is unwilling to bear besides the actual cost of the machine. On the contrary KRA is of the view that the ETR machines will help increase efficiencies in operations as well as in VAT processing. It is therefore important to assess the effectiveness of ETRs by taxpayers in processing of VAT returns and if their use has also assisted the Kenya Revenue Authority to collect as much VAT as possible. ETRs are expected to help taxpayers process their VAT returns efficiently without major problems that were associated with the earlier paperwork system. The costs of installing and operating the machines will be expected to be correlated with the benefits accruing to their use and comparatively lower than those incurred in the earlier system.

1.3 Objectives of the Study

The general objective of the study was to assess the effectiveness of Electronic Tax Registers in the processing of Value Added Tax returns by taxpayers.

The specific objectives were;

- i To examine the effectiveness in terms of time and costs of ETRs in the processing of VAT returns.
- ii To find out possible solutions to the problems encountered in processing of VAT returns using Electronic Tax Registers.

1.4 Research Hypotheses

- i. The use of Electronic Tax Registers has increased efficiency in the processing of VAT returns by taxpayers.
- ii. The use of Electronic Tax Registers has helped reduce problems encountered in the processing of VAT returns.

1.5 Importance of the Study

This study was to help enrich the scarcity of literature available in this area of the use of Electronic Tax Registers in processing tax returns especially in the developing countries. It was also to assist KRA policy makers to establish suitable VAT processing systems that will not expense the taxpayers so much. The study was also to help analyse the economic advantages of both the manual tax processing system and the electronic system as well as add to the academia gap of knowledge in this area.

1.6 Scope and Justification of the Study

The study covered Kisii town. Kisii town is located 300 miles away from the country's capital city, Nairobi along the Nairobi Isebania road .It is a lucrative business centre and majority of the major business enterprises are registered taxpayers and have adopted the modern Electronic Tax Register system that was recently introduced by the Kenya Revenue Authority. All the registered businesses will be identified from the KRA's regional office records.

Two areas of study emerged in this field. The first one was the examination of the various costs incurred by firms in processing tax returns as well as time spent in the processing of the tax returns. The second one focused on the problems that traders encountered when using the electronic system in processing their tax returns.

Many studies on tax and tax systems had only concentrated in a few areas such as; tax evasion and tax systems and majority of them in the developed countries, almost all the Western countries leaving a gap in the developing countries especially the African countries and more so in such areas as Electronic Tax processing methods by traders.

1.7 Assumptions of the Study

It was assumed that;

- i. The respondents (Business managers in Kisii Town) were objective and truthful in filling in the questionnaires;
- ii. The findings from the study can be generalized to wider regions;
- iii. The respondents were able to make an objective interpretation of the test items.

1.8 Limitations of the Study

- i. The respondents did not respond to all the questions and give back their questionnaires promptly because of the nature of information needed that is, financial matters;
- ii. Lack of cooperation from the managers who feared divulging of information to unknown people who may be investigators;
- iii. Due to limitation of time and other resources available to carry out the study, the research was conducted only in Kisii town.

1.9 Definition of Terms

Electronic Tax Register (ETR) - This is a device approved by the Kenya Revenue Authority, which is the revenue collection authority of the Kenyan Government. They are installed and programmed by KRA officials, to record and issue fiscal data of goods and services sold. It is the same as a cash register but with fiscal memory, a special Read Only Memory (ROM) built into the cash register to store tax information at the time of sale.

Value Added Tax (VAT) – This is a type of tax levied on goods sold. It is collected by the Kenya Revenue Authority on behalf of the government of Kenya. It is charged at 16% of total goods sold or on the price of an item. It is payable every month and not later than the 20th of the next month.

Kenya Revenue Authority (KRA) – This is an institution that is entrusted with the collection of all types of taxes on behalf of the Kenyan Government.

VAT Taxpayer – This is a trader registered by the KRA with a gross turnover of at least Kshs. 5 Million per year, approximately Kshs. 420,000 per month.

Processing – Refers to the tasks performed by taxpayers in compiling the value of VATable goods sold to determine the amount of VAT and the remittance of that amount to the KRA.

Effectiveness – Refers to the ability of the ETRs to help the taxpayers save time, minimise costs, increase accuracy, easy record keeping and help them in solving problems associated with filing of tax returns.

CHAPTER TWO: LITERATURE REVIEW

2.1 History and Development of VAT

Value Added Tax (VAT) is a type of sales tax. Other countries like Canada and Singapore call it a goods and services tax. It is a form of indirect tax that is collected from someone but the tax burden is borne by somebody else who is the final consumer of the taxable goods and services (Allingham et al, 1972).

VAT was invented by a French economist in 1953. Maurice Laure, joint director of French tax authority introduced VAT with effect from 10th April 1954 for large businesses, and extended over time to all business sectors. In Kenya, it was established in the year 1995 (GOK, 2004) and is the most important source of state finance and accounts for approximately 46% of state revenues (GOK, 1993).

Revenues from VAT are frequently lower than expected because they are difficult and costly to administer and collect. VAT has become more and more important in many jurisdictions as tariff levels have fallen worldwide due to trade liberalization, as VAT has essentially replaced lost tariff revenues. Whether the costs and distortions of VAT are lower than economic inefficiencies and enforcement issues like smuggling from high import tariffs is debated, theory suggests VATs are far from efficient (Waweru, 2006).

2.2 Development of Electronic Tax Collection Systems in Kenya

Tax collection systems in Sub – Saharan Africa unlike in the Western countries are still developing. The World Customs Organisation (WCO) has helped in setting up standards that averagely need to be adopted by almost every country in order to combat tax vices that exist in almost all countries (IMF, Nov. 2005).

In recognition of the need to undertake coherent and comprehensive reforms, some years back, the KRA adopted a Tax Administration Reform and Modernisation Programme whose primary objective was to modernise and integrate its operations in line with international best practice of tax collection. Under this ongoing programme, KRA has implemented the following key measures aimed at enhancing revenue collection and service delivery to taxpayers:

- i. Deployment of the SIMBA 2005 System in the Customs Services Department.
- ii. Installation of X-ray cargo scanners at the Kilindini port in Mombasa.

- iii. Implementation of a function-based rather than tax-based organisational structure in order to offer seamless service to taxpayers. In this regard, the former Income Tax and VAT departments were merged to form the domestic taxes department, which also incorporates domestic excise tax operations. Currently the focus has shifted towards aligning service delivery to market segments as reflected in the recent decision to establish the large taxpayers unit into a full-fledged department.
- iv. Implementation of a computerised system for the management of Motor Vehicle records and payments. Other past reform initiatives include the introduction of, among others, the Personal Identification Number (PIN), the Income Tax self-assessment programme, as well as the simplification of documentation and processes in various areas.

The KRA commissioner general during tax payers' day, (Daily Nation, 23rd Oct. 2006) said that KRA is looking into the introduction of electronic data interchanges with taxpayers and their bankers and the full integration of the taxpayer database via the PIN. It is also in the process of implementing an electronic cargo tracking system aimed at addressing the intractable problem of the dumping of transit goods.

The ETR programme is one among many tax administration reform measures that the KRA has undertaken. ETRs were introduced in June 2004 to ensure that sales are properly recorded by registered taxpayers in the country (Price Waterhouse Coopers, Oct. 2005). This initiative, which is initially focused on improving compliance with VAT requirements, has the capacity to transform revenue collection in this field, as is the case in other countries where it has been used. Indeed estimates place the potential for additional VAT collection from this initiative at up to Ksh.10 billion annually. This is so because much of the VAT monies that Kenyans pay over shop counters never reach the intended destination, ending up instead in the pockets of unscrupulous traders. This is a grossly unfair situation because apart from taxpayers being duped into paying taxes that end up in private pockets, the government is denied the resources necessary to facilitate service delivery improvement.

2.3 Electronic Cash Registers – The Tanzanian case

Electronic Cash Registers were introduced in Tanzania in July 2002. These were to be used by VAT registered taxpayers to process their VAT returns as required by the Tanzanian law. The law requires VAT registered retailers to record their daily sales and issue receipts through “Electronic Cash Registers” (ECRs). An acceptable ECR should be capable to issue receipts for each transaction containing: Name, Address, VAT Registration Number and TIN of the supplier, date of supply, Consecutive receipt number, brief description of each category of goods or services supplied, tax exclusive value of each category of goods or services supplied, total tax charged as well as total tax inclusive value of supply. Other attributes of an ECR include; a back-up master audit till roll, a permanent store of all entries, capability to store entries for up to 5 years, A battery back up against power failure and Read, display and print facilities (www.tra.go.tz).

2.3.1 Reasons for introducing ECRs in Tanzania.

Electronic Cash registers were introduced in Tanzania mainly because;

- i. Retailers pose a great risk to VAT since most of the retailers do not issue tax invoices or receipts.
- ii Consumers do not have the culture of asking for or demanding receipts or tax invoices

2.3.2 Experience on the use of ECRs in Tanzania

A presentation to a VAT Conference in Tanzania by A.M Mkindia (www.itdpweb.org) established that in the first year of introduction of ECRs, Tanzania’s estimated revenue increased by 19% in the first year but decreased to only 13% in the second year. This was attributed to a number of reasons;

- i. Resistance from the Business Community.
- ii. Credibility of the Scheme as loopholes that were experienced earlier on still existed.
- iii. Expensive goods sold at retail level require proper receipts/tax invoices.
- iv. Training of VAT Auditors on how the ECR operates is mandatory.
- v. Retailers operating more than one outlet must have ECR for each outlet.
- vi. Retailers operating mobile shops such as trucks selling soft drinks find it difficult to operate ECRs.

- vii. ECRs cannot be used in remote areas where there is no electricity. However, this is not a serious problem in countries where electricity is available even in the rural areas. There are very few VAT registered traders in the rural areas in Tanzania.
- viii. Increase of VAT registration threshold has lead into massive deregistration
- ix. Most of VAT registered retailers are operating below the new VAT registration threshold of Tshs.40 million (equivalent to about US \$ 40,000)
- x. Deregistered traders are not compelled to use ECRs although they are still required to keep proper records under Income Tax Act. 2004. It is appropriate to cause an amendment to the Income Tax Act so as to compel such traders to continue using ECRs just like what they were required to do under the VAT Act (Luoga F.,2002).

2.4 Advantages of Electronic Taxation

Automation is not an end in itself, but a crucial component of taxation reforms, which aims at modernizing tax administrations and aligning the legal framework and procedures with international standards and best practices. Automation facilitates the clearance of legitimate trade, improves the efficiency of taxation controls and secures revenue collection. In addition, it helps address expectations of traders and transport operators regarding transparency, predictability and reliability, as well as the simplification of border-crossing and administrative procedures (Jon M.Peha,1999).

An IMF study, 2005 on VAT refunds found out that a pre-condition for successful reform is a strong commitment on the part of government and key stakeholders. The premises and equipment necessary for automation may include new or rehabilitated offices, hardware, software, internal communication systems and connections to external networks, and they may also require the set-up of wireless networks and links. Furthermore, the introduction of ICTs needs to be accompanied by extensive capacity building.

Benefits of automation include a reduction of fraud, remote access to information, improved collection of statistics, and uniform application of tax legislation. The introduction of tax automation minimizes direct contacts between tax collection officers and traders or their agents, and hence leads to a reduction of corruption. Further benefits achieved through customs automation include improved reporting, control of file transfers, automatic reconciliation of tax returns declarations, and compliance testing of

bank files. Paperless declarations and customs automation save time and make it easier to focus on inspecting high-risk consignments. The possibility of submitting tax returns declarations on-line has in some cases made it possible to reduce the associated fees; in other cases it has helped eliminate the obligatory contracting of Customs agents (Robert S., 1997).

ICTs can significantly reduce the number and the potential negative impact of physical inspections. ICTs allow, inter alia, for pre-arrival clearance, risk analysis by tax authorities, and separation of release from clearance. With the help of ICTs, it is further possible to better plan the timing and location of physical inspections, thus significantly reducing the waiting times for trucks and containers. Finally, ICT solutions allow for better measurement of the length and number of physical inspections. Such measurement needs to cover the complete trade and transport operation and not be limited to tax clearance times only.

2.5 VAT Standard Rate in Kenya

Value Added Tax (VAT) applies to most transactions at 16%. Businesses with an annual turnover above 3 Million Kenyan shillings must register for VAT, but in some cases registration is compulsory regardless of turnover. A lower rate of 14% used to apply to restaurant services, and accommodation and other services provided by hotels but it was recently increased to 16 % to ensure uniformity in tax collection by the Minister of Finance during the 2006/07 budget, (GOK, 2006). Exports, some agricultural inputs, medicines, educational equipment, liquid petroleum gas, kerosene, maize flour, milk and newspapers are zero-rated.

Exemptions to VAT include live animals, most foodstuffs, building materials, financial services (subject to certain exceptions), insurance, passenger transport, entertainment (subject to certain exceptions), and the rental and lease of land and buildings (Deloitte & Touch, 1997).

2.6 Problems Encountered in Processing of Value Added Tax Returns

The sign of the relationship between efficiency and the method of processing tax returns and the system of tax collection used by taxpayers is one of the questions that still are not resolved nowadays. Allingham and Sandmo (1972) introduced the portfolio approach to solve the individual tax cost problem and showed that, under weak tax processing systems, a number of costs are incurred.

However, Yitzhaki (1994) found out that a rise in the tax rate increases the amount of tax processing costs. A number of issues can therefore be regarded as possible problems that are faced by taxpayers in processing of their VAT returns using Electronic Tax Registers.

Such issues include:

- i Time taken in processing VAT returns
- ii Tax preparation costs
- iii Staff costs required to process returns and improve revenue capture through more accurate data entry.
- iv Costs of stationery in form of receipt books, writing materials, files and filing of tax returns systems
- v Costs that are incurred in processing tax refunds
- vi Costs of auditing sales records.
- vii Insurance costs for the ETRs
- viii Space for keeping past data records
- ix Prosecution and refund follow up time and costs

Despite dramatic improvements in recent years in information technology, including automated data capture, the administrative and taxpayer compliance burden associated with large-scale invoice matching continues to be significant. Recent diagnostic reviews by FAD of invoice cross-checking systems have shown that these systems continue to generate considerable unproductive work. In Thailand, for example, IMF observed that more than half of the large taxpayer units of highly skilled auditors were substantially engaged in following-up and checking invoice discrepancies reported from the invoice matching system. Examination of the discrepancies revealed that many related to data entry errors (for example errors in taxpayer identification numbers and addresses), thereby creating administrative costs with no associated revenue benefits.

Under Kenya's VAT laws, refund claims exceeding a specified amount must be certified by a CPA registered with the Institute of Certified Public Accountants of Kenya. The law

imposes sanctions on accountants who knowingly certify false claims. Tax authorities, traders, and accounting professionals all contend that this approach has benefits. Tax officials argue that it helps eliminate fraudulent claims, and reduces administrative costs. Kenyan officials report that the number of refund claims by exporters dropped by 40 percent following introduction of the scheme, suggesting that many firms had been submitting false claims. By placing the onus on CPAs to certify the validity of refund claims, the government has in effect outsourced, in part, its verification program. Large exporters support the arrangement because it speeds up refunds, and for this they are willing to bear the increased compliance costs. CPA firms are also in favour because of the opportunity to generate service fees.

2.7 Global Perspective of VAT

During the past two decades, the IMF's Fiscal Affairs Department (FAD) has provided substantial technical assistance in implementing and improving Value Added Tax (VAT) systems in developing and transitional countries. The VAT is now a key component of the tax system in over 130 countries at different stages of economic development, raising about 25 percent of the world's tax revenue. Experience with VAT implementation in many countries show that refunding of credits has been the "Achilles heel" of the VAT. It has been a source of tension between tax authorities and the business sector and, in some countries, has led to complex administrative measures that have significantly undermined the functioning of the VAT system. (IMF, Nov. 2005)

Modern VAT systems, and their administration, operate on a principle of voluntary compliance, where taxpayers are expected to comply with their VAT obligations with limited intervention of revenue officials. Voluntary compliance is achieved through a system of self-assessment, where taxpayers, with access to information and assistance from the tax administration, calculate their own liabilities and refund entitlements, file returns, and pay tax and claim refunds that they themselves assess. If they fail to make accurate assessments and pay insufficient tax, or falsely claim refunds, they run the risk of being audited and subjected to penalties. Experience strongly suggests that VAT is feasible only as a self assessed tax. (IMF, Nov. 2005)

2.8 Critical Analysis

The introduction of Electronic tax registers (ETR) in Kenya was introduced with the main aim of combating vices that were mainly associated with the collection of taxes like; Tax evasion, filing of wrong tax returns and claiming of undeserved tax refunds.

As much as it was initially looked from such a perspective, a clear analysis has to be made to establish if it also benefits the traders as well. Earlier indications are that it assists traders in such ways as;

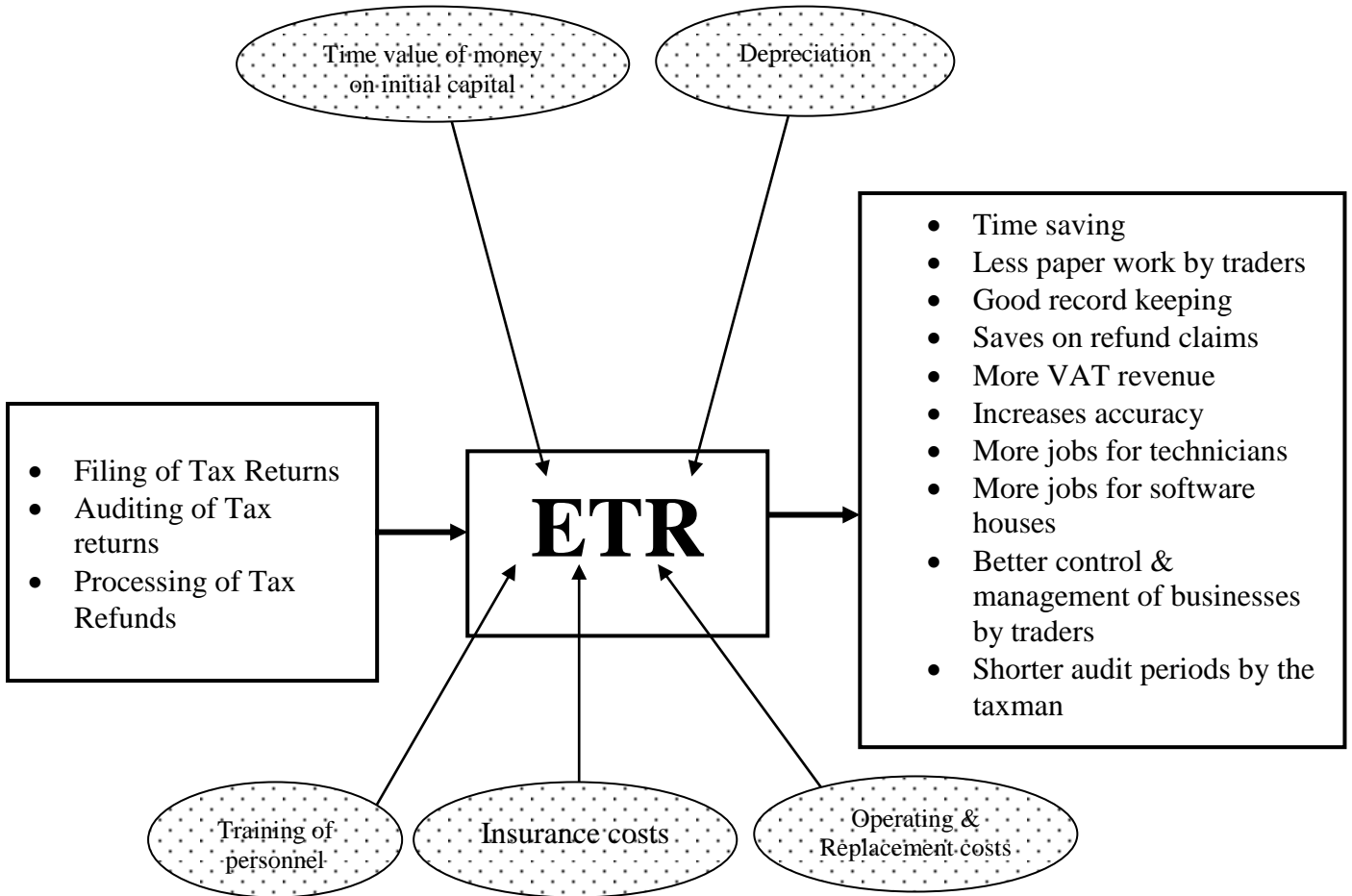
- i Saves time initially wasted in perusing of records.
- ii Reduction in tax preparation costs for example those paid to tax agencies.
- iii Reduction in labour costs e.g. overtime cost.
- iv Good record keeping – increases profits.
- v Increases efficiency in businesses.
- vi Reduces costs of tax refund claims.

2.9 Conceptual Framework

This study mainly assessed the use of ETRs in VAT processing. The advantages of using ETRs in VAT processing were each explored in detail. These advantages were closely examined in this study to find if the introduction of the ETR system was of benefit both to the taxpayer and the revenue collection authority. This study analysed both the advantages and disadvantages of using ETRs as a means of processing tax returns. Among the advantages of processing VAT returns using ETRs include; Reduction in labour costs e.g. overtime costs, good record keeping thus increases profits, increased efficiency in businesses, reduced costs of tax refund claims, increased job opportunities for technicians and software houses, better control and management of businesses by traders, shorter audit periods by taxman as well as more VAT revenue for the government. On the other hand the disadvantages were also be explored. These include; Initial installation cost, maintenance of the machine, operational costs, depreciation of the machines, time value of money on initial capital and training both to the existing and new employees as well.

Conceptual Framework

Uses, Benefits & Challenges of ETRs



Source: Own

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the procedures that the researcher used in the study to collect and analyze the data collected from the field. This section covers the following major areas: Research design, target population, sample and sampling procedure, data collection instruments, test of validity and reliability of instruments, data collection procedures, data analysis procedures and operationalization of the variables.

3.2 Study area

The study covered Kisii town. Kisii town is located 300 miles away from the country's capital city, Nairobi along the Nairobi Isebania road.

3.3 Research Design

The study adopted a census design to assess the use of Electronic Tax Registers on the processing of VAT returns by business managers in Kisii town so as to test their effectiveness as far as VAT processing is concerned. Descriptive study designs are used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2002)

3.4 Target Population

The target population for this study comprised of all the registered VAT taxpayers in Kisii town, who were 98 in number as provided by the regional KRA office. Kisii town was chosen because it was convenient to the researcher and it is also a lucrative business town. The population was stratified as;

- i 31 Service providers, which was equivalent to 32% of the total population.
- ii 60 Wholesalers and large-scale retailers, which represented 61% of the total population.
- iii 7 Supermarkets which represented 7 % of the total population.

3.5 Sampling Design

A systematic random sampling was adopted in this study. A nominal scale of 1 interval was applied to select the sample size from each of the strata. This design ensured that all elements of the population were given an equal chance of being selected. In this way, no element of chance was left and highest accuracy was obtained (Kothari C.R, 2002). Therefore the sample size was distributed as;

- i 28 Service providers
- ii 44 Wholesalers and large scale retailers.
- iii 6 Supermarkets.

3.6 Data Collection

In this study, both primary data and secondary data were collected by the researcher. Primary data was collected by use of questionnaires. The questionnaires were structured, open ended and closed ended which were dropped and then picked later. Primary data was also coded and tested for completeness. Secondary data was mainly collected from the KRA's regional office by analysing official documents and by past records inferences. A pilot study was however done using a few taxpayers to test the validity and reliability of the questionnaires.

3.7 Data Analysis

Raw data collected from the field was sorted and summarised in tables and diagrams. The process of data analysis involved several stages. Completed questionnaires were edited for completeness and consistency. The data was then coded and checked for any errors and omissions (Kaewsonth & Harding, 1992). The data was analyzed using procedures within Statistical Package for Social Sciences (SPSS) PC version 10.

The responses from part one to part three were analyzed to answer the research objective. The responses from the open-ended questions were coded; the mean and standard deviation were used for likert-scale responses. Content analysis was also used in the analysis of some of the open-ended questions. For closed questions, a comparative analysis using distribution tables, quartiles (percentiles) and graphical analysis was done to improve the presentation of the analyzed results for ease of interpretation.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter covers data analysis and findings of the research. The data is summarized and presented in the form of proportions, means, tables and graphs. Data was collected from 78 registered VAT taxpayers in Kisii town. The respondents were senior, middle level and low level managers. Out of the 78 registered VAT taxpayers to whom the questionnaires were administered, only 68 responded. This gives a response rate of 87% percent.

4.1.1 Age of the Business

The number of years a business has been in operation determines the experience of the business in filing its tax returns. It also determines one's ability to evaluate an old tax system, when changing to a new automated tax system. The respondents were asked to give the age of their businesses, and the results are represented in table 4.1.

Table 4.1: Age of the Business

Age of the Business	Distribution	
	Frequency	Percentage
Over 5 years old	46	67.6
Between 3 and 5 years old	11	16.2
Less than 2 years old	11	16.2
Total	68	100.0

Source: Research Data

From the results in table 4.1, it was found that most businesses have been in operation for more than five years, that is 68% of the businesses have been in operation for over 5 years, while 16% of them have been in operation for between 3 and 5 years, and less than 2 years respectively. This is an indication that the information in this study was given by experienced businesses and informants.

4.1.2 Type of Business

The registered VAT taxpayers in Kisii town are 98 in number as provided by the regional KRA office. The town is a lucrative business town. There are three categories of registered VAT taxpayers; 31 Service providers; 60 Wholesalers and Large-scale retailers; and 7 Supermarkets. The respondents were asked to indicate the type of business they are engaged in, and the results are as in table 4.2.

Table 4.2: Type of Business

Type of Business	Distribution	
	Frequency	Percentage
Supermarket	6	8
Wholesaler / Large scale retailer	44	65
Service provider	28	27
Total	68	100

Source: Research Data

From the results in table 4.2, it was found that 65% of the businesses were supermarkets, 27% service providers, and 8% were supermarkets. This is an indication that all the registered VAT taxpayers in Kisii town were well represented proportionately.

4.1.3 Acquisition of ETR machines and when acquired

Kenya has witnessed significant changes in many aspects of its economy over the last four decades, but like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries (Karingi, Wanjala, Dec, 2005). ETRs have been introduced to free the country of problems that plague tax systems of developing countries.

Table 4.3: Acquisition of ETR machines

Acquisition	Distribution	
	Frequency	Percentage
Yes	62	91.2
No	6	8.8
Total	68	100.0

Source: Research Data

The respondents were asked to indicate whether they have acquired ETR machines or not, and the results are as in table 4.3, above. From the results in table 4.3 above, 91% of the respondents indicated that they have acquired ETR machines, as 9% indicated they have not acquired any. This is an indication that most businesses in Kisii town have complied with the VAT requirements in Kenya.

Table 4.4: Time when the ETR machines were acquired

Time When Acquired	Distribution	
	Frequency	Percentage
More than 2 Years ago	41	71.9
1 -2 years ago	11	19.3
Less than 1 year ago	5	8.8
Total	57	100.0

Source: Research Data

The respondents were also asked to indicate the time when they might have acquired the ETR machines, and from the results in table 4.4, most businesses that is 72 % acquired their ETR machines, more than two years ago, 19 %, 1-2 years ago, and the rest (8%) less than one year ago. This is also a clear indication of compliance.

4.1.4 A refund for the initial cost and time taken for the refund

An IMF study, 2005 on VAT refunds found out that a pre-condition for successful reform is a strong commitment on the part of government and key stakeholders. Under Kenya's VAT laws, refund claims exceeding a specified amount must be certified by a Certified Public Accountant registered with the Institute of Certified Public Accountants of Kenya. The law imposes sanctions on accountants who knowingly certify false claims. The respondents were asked to indicate whether they have received a refund for the initial cost of the ETR machine and the timing, or not, and the results are as in tables 4.5 and 4.6 below.

Table 4.5: Refund for the Initial Cost

Refunded	Distribution	
	Frequency	Percentage
Yes	28	45.2
No	34	54.8
Total	62	100.0

Source: Research Data

Table 4.6: Time taken for the refund

Time Taken for the Refund	Distribution	
	Frequency	Percentage
More than 2 years	6	15.4
1 -2 years	11	28.2
Less than 1 year	5	12.8
In less than 1 month's time	17	43.6
Total	39	100.0

Source: Research Data

From the results in tables 4.5 and 4.6 above, 55% of the respondents indicated that they have not received any refund. For the 45% who have received their refunds indicated that 43% of them took less than 1 month's time, 28% took 1 -2 years , 15% took more than 2 years, and 13% took less than 1 year. Indeed these refunds are on the premise that equipment necessary for automation may include new or rehabilitated offices, hardware, software, internal communication systems and connections to external networks, and they may also require the set-up of wireless networks and links

4.2 Preparation of VAT returns and the ETR machines

4.2.1 Percentage of the business' total monthly VAT returns is equivalent to the cost of the ETR machine, and costs incurred in processing of vat using the ETR machine

The Kenya Government allows businesses to offset the cost of ETR installation against the input VAT as well as training of traders on the use and benefits of those devices. The respondents were asked to indicate percentage of the business' total monthly VAT returns that was equivalent to the cost of the ETR machine, and the results are as in tables 4.7 and 4.8 below.

Table 4.7: Percentage of the business' total monthly VAT returns is equivalent to the cost of the ETR machine

Percentage	Distribution	
	Frequency	Percentage
More than 50%	5	7.4
Between 30% and 50 %	15	22.0
Between 10% – 30 %	24	35.3
Less than 10%	24	35.3
Total	68	100.0

Source: Research Data

From the results in table 4.7 above, out of those who were sampled, 35% indicated that they have less than 10%, and between 10% – 30 % of the business' total monthly VAT returns equivalent to the cost of the ETR machine respectively. 22% indicated between 30% and 50 %, as 7% indicated above 50%.

Table 4.8: Percentage of the business' total monthly VAT returns is equivalent to the costs incurred in processing of VAT returns using the ETR machine.

Percentage	Distribution	
	Frequency	Percentage
More than 5%	11	16.2
Between 3% and 5 %	27	39.7
Between 1% – 3 %	6	8.8
Less than 1%	24	35.3
Total	68	100.0

Source: Research Data

Also from the results in table 4 .8 above, 39% of the respondents indicated that they have between 3% and 5% of the business' total monthly VAT returns equivalent to the cost of the ETR machine, as 35% indicated less than 1%, 16% indicated more than 5%, and 9% indicated between 1% – 3 %. This is an indication that most businesses in Kisii town have between 3% and 5% percentage of the business' total monthly VAT returns equivalent to the cost of the ETR machine.

4.2.2 Time taken to prepare VAT returns at the end of the month

The preparation of VAT returns at the end of the month may take different time ranges. The respondents were asked to indicate the time they take to prepare their VAT returns at the end of the month, and the results are as in table 4.9.

Table 4.9: Time Taken to Prepare the VAT Returns at the End of the Month

Time Taken	Distribution	
	Frequency	Percentage
More than 3 days	23	33.8
Less than 3 days	16	23.5
Less than 2 days	29	42.7
Total	68	100.0

Source: Research Data

From the results in table 4.9, 42% of the businesses take less than 2 days to prepare their VAT returns at the end of the month, 33% indicated more than three days, as 23% indicated less than three days. This is an indication that the businesses prepare and file their VAT returns in good time to beat the KRA deadlines. This is attributed to the use of ETR machines by businesses.

4.2.3 The involvement of tax agents' services in filing tax returns and the proportion of the monthly VAT returns paid to the agents.

Businesses sometime seek the involvement of tax agents' services in filing tax returns and with a proportion of the monthly VAT returns paid to the agents. The respondents were asked to indicate whether they involve the tax agents' services in filling tax returns and with a proportion of the monthly VAT returns paid to the agents, and the results are as in table 4.10 and table 4.11.

Table 4.10: The involvement of tax agents' services in filing tax returns

Involvement	Distribution	
	Frequency	Percentage
Yes	24	35.3
No	44	64.7
Total	68	100.0

Source: Research Data

Table 4.11: Proportion of the monthly VAT returns paid to the agents in filing tax returns

Agent Proportion	Distribution	
	Frequency	Percentage
More than 30%	6	20.7
Between 20% and 30%	6	20.7
Between 10% and 20%	11	37.9
Less than 10%	6	20.7
Total	29	100.0

Source: Research Data

From the results in table 4.10, 65% of the respondents indicated that they don't involve the tax agents' services in filing tax returns. Of the 35% who involve the tax agents' services in filing tax returns, 21% of them pay more than 30%, between 20% and 30%, and less than 10% of their monthly VAT returns respectively to the tax agents' services in filing tax returns. This is an indication that most businesses can file their returns on their own through the assistance of the ETR machines, and even those who use agents are not exploited as they all pay a normal fee.

4.2.4 Payment of overtime wages to the employees for the preparation of VAT returns

The involvement of an agent in the preparation and filing of the monthly VAT returns can involve a fixed fee or a variable fee. The respondents were asked to indicate whether they pay an overtime wage to the employees who prepare VAT returns, and the results are as in table 4.12.

Table 4.12: Payment of overtime wages to the employees for the preparation of VAT returns

Payment of Overtime to Agent	Distribution	
	Frequency	Percentage
Yes	10	26.3
No	28	73.7
Total	38	100.0

Source: Research Data

From the results in table 4.12 above, 73% of the respondents who involve tax agents in the preparation of VAT returns don't pay overtime wages to the employees who prepare the VAT returns, as 26% pay. This might be because the businesses in the town have been in operation for long hence experienced in the preparation and filing of the VAT returns as well as through the use of ETR machines.

4.2.5 Delay in filing the business monthly VAT returns and by how long.

The preparation of VAT returns may be a tedious exercise. It might lead to delays hence a penalty. The respondents were asked to indicate whether they have ever had any delay in filing the business monthly VAT returns and by how long, and the results are as in tables 4.13 and 4.14.

Table 4.13: Delay in Filing the Business Monthly VAT Returns

Lateness in Filing	Distribution	
	Frequency	Percentage
Yes	17	25.0
No	51	75.0
Total	68	100.0

Source: Research Data

From the results in table 4.13 above, 75% of the respondents indicated that they have never delayed filing their business monthly VAT returns, as 25% indicated they had had. The high rate of compliance might be attributed to timeliness in the preparation of the returns and the shorter time it takes the businesses to prepare the returns.

Table 4.14: Delay period in filing the business monthly VAT returns

Number of Days	Distribution	
	Frequency	Percentage
More than 10 days	6	35.3
Between 5 and 10 days	0	0
Less than 5 days	11	64.7
Total	17	100.0

Source: Research Data

Also from the results in table 4.14 above, out of the 35% of the businesses who delay filing their returns, 64% delay for less than five days, as 35% delay for more than 10 days. This is not such serious given that it is only a small number of businesses who delay filing their VAT returns at the end of the month.

4.2.6 The attribution of ETR machine in timely filing of the business monthly VAT returns.

The timely filing of the monthly VAT returns as seen above may be attributed to many factors. ETR is one of the factors. The respondents were asked to indicate whether the timely filing of monthly VAT returns can be attributed to the use of ETRs and the results are as in table 4.15. From table 4.15 below, 63% of the respondents indicated that timely filing of VAT returns can be attributed to the adoption of the ETR machine.

Table 4.15: Attribution of ETR in timely filing of VAT returns.

Attribution of ETR in Timely Filing of VAT Returns	Distribution	
	Frequency	Percentage
Yes	29	63.0
No	17	37.0
Total	46	100.0

Source: Research Data

4.2.6 The contribution of the ETR machines in business sales audit and frequency of sales audit.

The use of ETR machines can lead to improved sales audit for the business, since everything that is VAT-able is captured to record. At the same time, it is expected that the sales audit frequency should be low. The respondents were asked to indicate whether they have enjoyed any benefits in the faculty of sales audit through the adoption of ETR machine, how frequent they do their sales audit post adoption of the ETR machine, and the results are as in table 4.16 and table 4.17 below.

Table 4.16: Contribution of ETR in sales audit.

Contribution of ETR in Sales Audit	Distribution	
	Frequency	Percentage
Yes	45	72.6
No	17	27.4
Total	62	100.0

Source: Research Data

From the results in table 4.16 above, 73% of the respondents indicated that the use of ETR machines has led to improved sales audit for their businesses, as 27% indicated it has not improved. This is an indication that indeed the use of ETRs can improve sales audit on top of timely filing of monthly VAT returns.

Table 4.17: How often sales audits are done for those using ETR machines

How Often Sales Audits are Done (If Yes From Above)	Distribution	
	Frequency	Percentage
Monthly	17	37.8
Daily	28	62.2
Total	45	100.0

Source: Research Data

From table 4.17 above, out of the 73% who enjoy the benefits of ETRs in sales audit, 62% of the businesses are able to conduct their sales audit daily. A clear indication that ETRs can reduce the frequency of audits giving prompted sales patterns and feedbacks. This can not be the same for those who do not use ETRs, or may be attributed to their operational scales.

Table 4.18: How often sales audits are done for those not using ETR machines.

How Often Sales Audits are Done (If No From Above)	Distribution	
	Frequency	Percentage
Monthly	17	77.3
Daily	5	22.7
Total	22	100.0

Source: Research Data

From table 4.18 above, out of the 27% who do not enjoy the benefits of ETRs in sales audit, 77% of the businesses are able to conduct their sales audit monthly. An indication that failure to use ETRs can lead to prolonged frequencies of audits leading to failure to give prompted sales patterns and feedbacks. This can not be the same for those who use ETRs, or may be attributed to their operational scales.

4.2.7 The Contribution of the ETR machines in business stock taking and frequency in stock taking

Stock taking is the act or process of inventorying merchandise or the supplies on hand (Christensen, 1997). The use of ETR machines can lead to improved stock taking for the business, since everything that is VAT-able is captured to record. At the same time, it is expected that the stock taking frequency should be low. The respondents were asked to indicate whether they have enjoyed any benefits in the faculty of stock taking through the adoption of ETR machine, how frequent they do their stock taking post adoption of the ETR machine, and the results are as in tables 4.19, 4.20 and 4.21 below.

Table 4.19: The Contribution of the ETR machines in business stock taking.

Contribution of ETR in Stock Taking	Distribution	
	Frequency	Percentage
Yes	45	72.6
No	17	27.4
Total	62	100.0

Source: Research Data

From the results in table 4.19 above, 73% of the respondents indicated that the use of ETR machines has led to sound reappraisal of their business stock situation to improve the stock taking prospects, as 27% indicated it has not improved. This is an indication that indeed the use of ETRs has improved stock taking in addition to timely sales audit.

Table 4.20: How often stock taking is done for those using ETR machines.

How Often Stock Taking are Done (If Yes From Above)	Distribution	
	Frequency	Percentage
Monthly	18	40.0
Weekly	6	13.3
Daily	21	46.7
Total	45	100.0

Source: Research Data

Wise control of inventory is often a critical factor in the success of businesses in which inventories are significant (Christensen, 1997). From table 4.20 above, out of the 73% who enjoy the benefits of ETRs in stock taking, 46% of the businesses are able to reappraise their stock level on daily basis, 40% on monthly basis and 13% on weekly basis. An indication that ETR machines have assisted businesses to implement their inventory policies and goals.

Table 4.21: How often stock taking is done for those not using ETR machines.

How Often Stock Taking are Done (If No From Above)	Distribution	
	Frequency	Percentage
Monthly	6	26.1
Daily	17	73.9
Total	23	100.0

Source: Research Data

From table 4.21 above, out of the 26% who do not enjoy the benefits of ETRs in sales audit, 73% of the businesses are able to conduct their sales audit daily too, but this should not be the expected scenario in any business setting. This can not be the same for those who use ETR machines.

4.2.8 Business encounter of any breakdown of the ETR machine; the time period the ETR breakdown lasted; and the cost of repairing the ETR breakdown

An ETR machine like any other machine is subject to breakdown which might lead to drawbacks including failure to file returns, failure to pay correct taxes, tax evasion activities, non-payment of duty on imported goods including motor vehicles, diversion of transit goods, undisclosed payments to employees, unethical conduct by KRA officers and /or taxpayers (<http://www.kra.go.ke/customer-care/comp>).

The respondents were asked to indicate whether their business has ever encountered a breakdown of the ETR machine; the time period the ETR breakdown lasted; and the cost of repairing the ETR machine; the results are as in tables 4.22, 4.23 and 4.24 below.

Table 4.22: Business encounter of any breakdown of the ETR machine.

Encounter of any Breakdown of the ETR Machine	Distribution	
	Frequency	Percentage
Yes	38	61.3
No	24	38.7
Total	62	100.0

Source: Research Data

Table 4.23: Time period the ETR breakdown lasted.

The Time Period the ETR Breakdown Lasted (If Yes From Above)	Distribution	
	Frequency	Percentage
Over 6 hours	22	57.9
Between 4 to 6 hours	10	26.3
Less than 2 hours	6	15.8
Total	38	100.0

Source: Research Data

Table 4.24: The Cost of repairing the ETR machine after a breakdown.

The Cost of Repairing the ETR Breakdown (If Yes From Above)	Distribution	
	Frequency	Percentage
Over Kshs. 5,000	5	18.5
Between Kshs 1,000 and Kshs 5,000	16	59.3
Less than Kshs 1,000	6	22.2
Total	27	100.0

Source: Research Data

From the results in tables 4.22, and 4.23 above, 61% of the registered businesses in the town have encountered an ETR break down; but with 57% lasting for over six hours, 26% lasting for between 4-6 hours and 16% for less than 2 hours. This is quite temporary. From table 4.24 above, on the cost of repairing the ETR breakdown, 59% indicated that it costs between Kshs 1,000 and Kshs 5,000; 22% indicated that it costs less than Kshs 1,000; as 19% indicated that it costs over Kshs. 5,000, an indication that the breakdowns were minor, costing very little that is less than five thousand, compared to to the intial cost of acquiring the ETRs.

4.2.9 Ability to report the ETR machine breakdown to KRA, and actions taken by KRA

The taxpayers are advised to report any breakdown of their ETRs to KRA, since such breakdowns might lead to failure to file returns, failure to pay correct taxes, tax evasion activities, non-payment of duty on imported goods, undisclosed payments to employees, unethical conduct by KRA officers and taxpayers, which amount to corruption (<http://www.kra.go.ke>). After reporting the breakdowns, it is the responsibility of KRA to take action. The respondents were queried on their ability to report the ETR machine breakdown to KRA, and actions taken by KRA and the results are as in tables 4.25 and 4.26 below.

Table 4.25: Ability to report the ETR machine breakdown to KRA

Reported the ETR Machine Breakdown to KRA	Distribution	
	Frequency	Percentage
Yes	22	57.9
No	16	42.1
Total	38	100.0

Source: Research Data

Table 4.26: Actions Taken By KRA on the ETR Machine Breakdown

Actions Taken By KRA on the ETR Machine Breakdown	Distribution	
	Frequency	Percentage
Refunded the costs of repair	0	0
Asked for a claim form	5	29.4
No action yet	12	70.6
Total	17	100.0

Source: Research Data

The term breakdown has several similar but distinctly different meanings. The term may apply to a failure of an electric circuit or system with consequent lack of function. Alternately, it may refer to a rapid reduction in the resistance of an electrical insulator that can lead to a spark jumping around or through the insulator. This may be a momentary event (as in an electrostatic discharge), or may lead to a continuous arc discharge if protective devices fail to interrupt the current in a high power circuit (Young *et al.*, 2004). From the results in table 4.25, 58% of those who had experienced ETR machine breakdown, reported them to KRA, and the actions taken by KRA, featured no action taken as 71% and 29% were asked for a claim form. This is within the acceptable limits based on the various dimensions of machines breakdown.

4.3 The effectiveness of Electronic Tax Registers in processing of Value Added Tax returns.

Electronic tax Registers reduce the tax-reporting burden on businesses while improving the efficiency and effectiveness of government operations, provides timely and accurate tax information to businesses, increases the availability of electronic tax filing, and models simplified state tax employment laws.

4.3.1 Increase in revenue collection after the implementation of ETRs

Revenue is a business term for the amount of money that a business receives from its activities in a given period, mostly from sales of goods and services to customers. It is not to be confused with the terms "profits" or "net income" which generally mean total revenue less total expenses in a given period. In Europe the term is turnover. For individuals, the equivalent term is *income*. For governments, revenue refers to the gross proceeds received from taxes and fees. For non-profit organizations, revenue from products and services can be expanded to include proceeds from donations, grants, trade in lieu of cash, and other liquid assets (<http://www.answers.com/topic/revenue>). Revenue is often referred to as the "top line" due to its position on the income statement at the very top. This is to be contrasted with the "bottom line" which denotes net income, revenues after all applicable costs. At times, the term "Sales" is used interchangeably, but is only accurate when the amount described is denoted in currency as opposed to units.

Table 4.27: Increase in revenue collection after the implementation of ETRs

Increase in Revenue Collection	Distribution	
	Frequency	Percentage
Yes	40	70.2
No	17	29.8
Total	57	100.0

Source: Research Data

ETRs can enhance the revenue collection resulting from sound sales and stock audits. The respondents were asked to indicate whether the use of ETRs have improved revenue collection for their businesses, and the results are as in table 4.27 above. From the results, 70% of the respondents indicated that the use of ETRs has increased the amount of money the businesses receive from its activities in a given period, mostly from sales of products or services to customers.

4.3.2 Monthly increase in VAT returns after ETR implementation.

The VAT returns can be influenced by the amount of money that a company actually receives during a specific period, including discounts and deductions for returned merchandise. The calculation of VAT returns is the "top line" or "gross income" figure from which costs are subtracted to determine net income.

The respondents were asked to indicate whether monthly VAT returns have increased with the implementation of ETRs and the results are shown in table 4.28 below. From the results in table 4.28, 80% of the respondents indicated that the monthly VAT returns have increased with the implementation of the ETRs. Thus the ETRs are effective in the VAT returns documentation.

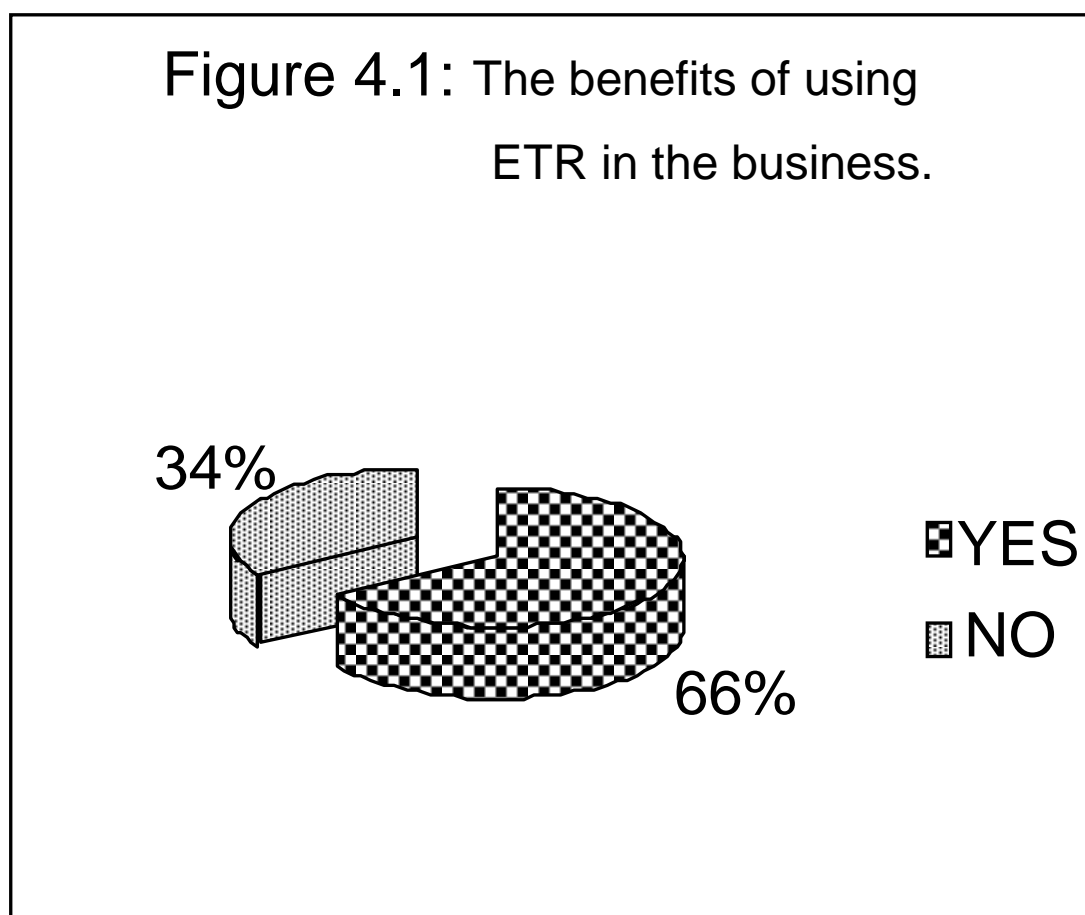
Table 4.28: Monthly increase in VAT returns after ETR implementation.

Increase in Revenue Collection	Distribution	
	Frequency	Percentage
Yes	46	80.7
No	11	19.3
Total	57	100.0

Source: Research Data

4.3.3 The benefits accrued to the use of ETR in the business.

The respondents were asked to give their opinion on how the introduction of ETR has assisted their businesses, while citing reasons. From the research data depicted by figure 4.1 below, 66% of the respondents recommended the use of ETRs in business to have led to various benefits in their businesses, as opposed to 34% who indicated they have not enjoyed any benefits of using the Electronic Tax Registers.



Source: Research Data

Of the 66% who indicated that they have harvested the benefits of ETRs, they cited the following reasons ranging from:

- i Increased efficiency in sales audit.
- ii Increase in sales collection.
- iii Increased efficiency in stock-taking.
- iv Easy VAT Processing leading to less risk of prosecution.
- v ETRs have led to timely preparation of tax reports.
- vi ETRs have led to increase in business returns.

vii Fast and Efficient.

Of the 34% who indicated that they have not benefited from the use of ETRs, cited the following reasons ranging from:

- i The ETRs do not suit their kind of business.
- ii The ETRs give inaccurate records and results for businesses that engage in field sales.
- iii The ETR Machine is not applicable to service providers.
- iv Some businesses previously had point of sale software that did all calculations.

The benefits thus hold a strong case against the consequences.

4.3.4 The effectiveness of using Electronic Tax Registers in processing Value Added Tax returns.

The Kenya government requires VAT registered businesses to complete VAT Returns at regular intervals. These tax periods are set according to the needs of the business and the department. One is required to fill in a return so that VAT can be accounted for at the correct time. To evaluate the effectiveness of ETRs in fulfilling this objective, the respondents were asked to evaluate the use of ETRs, and the results are as in table 4.28.

From table 4.29 below, it was found that the use of ETRs was not a waste of funds and has assisted the businesses in many ways. They also indicated that ETRs don't break down too often. Further the introduction of ETRs has assisted in reducing costs that the businesses used to incur in processing VAT; ETRs have really helped increase profits due to their efficient nature, and lastly the introduction of ETR has assisted ease the work of processing VAT returns. All the above were to a high extent considering that a mean of two had the most significant standard deviation.

Table 4.29: Effectiveness of using ETRs in processing of VAT.

Effectiveness of Using ETRs in VAT processing	Descriptive Statistics		Rank
	Mean	Std. Deviation	
ETR was a waste of funds and has not assisted the business in any way.	2.31	1.123	1
ETRs break down too often.	2.91	1.206	2
The introduction of ETRs has assisted in reducing costs that the business used to incur in processing VAT.	3.00	1.496	3
ETRs have really helped increase profits due to their efficient nature.	3.06	1.402	4
The introduction of ETRs has assisted ease the work of processing VAT returns.	3.84	1.367	5

Source: Research Data

4.3.3 Suggestions made to the Kenya Revenue Authority (KRA) regarding Electronic Tax Registers by the registered VAT taxpayers

The KRA has articulated a vision for Kenyan customs, and in the process of delivering such mandate, it has faced challenges while meeting its pillars that include; Building the capacity of customs to better carry out its responsibilities in a fast changing global environment; Better synergy and co-operation between customs, and customs and other government agencies, intergovernmental organizations and the private sector; A commitment to good governance; and Promoting intra-African trade and investment.

The respondents were asked to give some recommendations to the Kenya Revenue Authority (KRA) regarding Electronic Tax Registers by the registered VAT taxpayers: From the research findings, the respondents made the following recommendations;

- i ETRs are expensive, acquisition cost should be paid in instalments
- ii ETRs should be compatible with computers used in business premises
- iii ETRs should be free since they benefit the government in revenue collection and the businesses.
- iv KRA should introduce ETRs that can handle field sales.
- v KRA should introduce cheaper ETRs

- vi KRA should introduce ETRs that have less rates of breakdown.
- vii KRA should reimburse servicing expenses incurred by businesses to repair ETRs.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings and makes conclusions on this study on the effectiveness of ETRs in processing of VAT returns by taxpayers that were introduced to replace the earlier manual system of VAT processing. It also includes the study recommendations for improvement and for further research

5.2 Summary

The main purpose of the study was to assess the effectiveness of Electronic Tax Registers in the processing of Value Added Tax returns by taxpayers. Specifically, to examine the effectiveness in terms of time and costs of ETRs in the processing of VAT returns; and lastly to find out possible solutions to the problems encountered in processing of VAT returns using Electronic Tax Registers.

Literature review items were used to come up with the items on the questionnaire. The research methodology was based on the fact that the study was a census and descriptive research design. This method allowed the collection of a large amount of descriptive information that was analyzed.

Data was collected from 78 registered VAT taxpayers in Kisii town. The respondents were senior, middle level and lower level managers. Out of the 78 registered VAT taxpayers to whom the questionnaires were administered, only 68 responded. This gives a response rate of 87 percent. A questionnaire with open ended and closed ended questions was developed by the researcher and used in data collection. Data analysis tools used in the research were Excel and SPSS. Data was presented in form of tables and graphs. This summary is based on two research questions;

5.2.1 The effectiveness in terms of time and costs of ETRs in the processing of VAT returns

On general information and the effectiveness of ETRs in VAT processing, it was found out that most businesses have been in operation for more than five years, an indication that the information provided in this study was given by experienced businesses and informants. All the registered VAT taxpayers in Kisii town were well represented looking at their proportionate numbers in the study.

Kenya has witnessed significant changes in many aspects of its economy over the last four decades, but like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries (Karingi, Wanjala, Dec, 2005). ETRs have been introduced to free the country out of the problems that plague tax systems of developing countries. From the research data, most businesses (91%) have acquired ETR machines, which were acquired more than two years ago; an indication that most businesses in Kisii town have complied with the VAT requirements in Kenya. But most businesses (55%) have not received any refund which takes less than 1 month's time. Indeed these refunds are on the premise that equipment necessary for automation may include new or rehabilitated offices, hardware, software, internal communication systems and connections to external networks, and they may also require the set-up of wireless networks and links.

The Kenya Government allows businesses to offset the cost of the ETR installation against the input VAT as well as training of traders on the use and benefits of those devices. On the effectiveness of preparing VAT returns and the ETR machines; most businesses have less than 10% of the business' total monthly VAT returns equivalent to the cost of the ETR machine, as others have between 3% and 5% of the business' total monthly VAT returns equivalent to the cost of the ETR machine.

The preparation of VAT returns at the end of the month may take different time ranges. Most businesses take less than 2 days to prepare their VAT returns at the end of the month, an indication that the businesses prepare and file their VAT returns in good time to beat the KRA deadlines.

Businesses sometimes seek the involvement of tax agents' services in filing tax returns and with a proportion of the monthly VAT returns paid to the agents. From the research, most businesses in Kisii town indicated that they don't involve the tax agents' services in filing tax returns. Of those who involve the tax agents' services in filing tax returns, they pay more than 30% of their monthly VAT returns to those tax agents. This is an

indication that most businesses can file their returns on their own, and even those who use agents are not exploited as they all pay a normal fee.

From the research findings most businesses who don't involve tax agents in the preparation of VAT returns don't pay overtime wages to the employees who prepare the VAT returns, because the businesses in the town have been in operation for long hence experienced in the preparation and filing of the VAT returns. However the preparation of VAT returns may be a tedious exercise as it might lead to delays hence a penalty, but most businesses in Kisii town have never delayed filing their monthly VAT returns. This indeed shows a high rate of compliance. Most of them delay for less than five days which is not such serious since only a small number of businesses fall in this category.

The timely filing of the monthly VAT returns as seen above may be attributed to many factors. ETR is one of the factors. Most businesses indicated that timely filing of VAT returns was attributed to the adoption of the ETR machine. The use of ETR machines has also led to improved sales audit for the business, since everything that is VAT-able is captured to record. This is an indication that indeed the use of ETRs has improved sales audit on top of timely filing of monthly VAT returns. The frequency of sales auditing has reduced to daily giving prompted sales patterns and feedbacks.

Stock taking is the act or process of inventorying merchandise or the supplies on hand (Christensen, 1997). The use of ETR machines can lead to improved stock taking for the businesses, since everything that is VAT-able is captured to record. At the same time, it is expected that the stock taking frequency should be low. From the study, the use of ETR machines has led to sound reappraisal of their business stock situation to improve the stock taking prospects, an indication that indeed the use of ETRs has improved stock taking in addition to timely sales audit.

Wise control of inventory is often a critical factor in the success of businesses in which inventories are significant (Christensen, 1997). From the study, most businesses (73%) enjoy the benefits of ETRs in stock taking, now done on a daily basis. An indication that ETRs have assisted businesses in the implementation of management's inventory policies in a manner that assures that the goals of inventory management are met. Of those (26%) who do not enjoy the benefits of ETRs in sales audit, most of them (73%) are able to conduct their sales audit daily too.

ETRs like any other machine is subject to breakdown which might lead to drawbacks including failure to file returns, failure to pay correct taxes, tax evasion activities, non-

payment of duty on imported goods including motor vehicles, diversion of transit goods, undisclosed payments to employees, unethical conduct by KRA officers and taxpayers (<http://www.kra.go.ke/customer-care/comp>). From the study, most of the registered businesses in the town had encountered ETR breakdown; which lasted for six hours which actually cost between Kshs 1,000 and Kshs 5,000; an indication that the breakdowns were minor, costing very little that is less than five thousand, compared to the initial cost of acquiring the ETRs.

The businesses are advised to report any breakdown of their ETRs to KRA, since such breakdowns might lead to failure to file returns, failure to pay correct taxes, tax evasion activities, non-payment of duty on imported goods undisclosed payments to employees, unethical conduct by KRA officers and taxpayers, which amount to corruption (<http://www.kra.go.ke>). After reporting the breakdowns, it is the responsibility of KRA to take action. From the study, most businesses which had experienced ETR machine breakdown reported them to KRA, and no action had been taken by KRA.

On the effectiveness of Electronic Tax Registers in processing of Value Added Tax returns; Electronic Tax Registers reduce the tax-reporting burden on businesses while improving the efficiency and effectiveness of government operations, provides timely and accurate tax information to businesses, increases the availability of electronic tax filing, and models simplified state tax employment laws. It was found that ETRs have enhanced revenue collection resulting from sound sales and stock audits.

The VAT returns can be influenced by the amount of money that a business receives during a specific period, including discounts and deductions for returned merchandise. The calculation of VAT returns is the "top line" or "gross income" figure from which costs are subtracted to determine net income. It was found that the monthly VAT returns have increased with the implementation of the ETRs. Thus the ETRs are effective in the VAT returns documentation. Thus most businesses (66%) qualified the use of ETRs in business to have accrued many benefits to their businesses, citing the following reasons ranging from:

- i Increased efficiency in sales audit
- ii Increase in sales collection
- iii Increased efficiency in stock-taking
- iv Easy VAT Processing leading to less risk of prosecution

- v ETRs have led to timely preparation of reports
- vi ETRs have led to increase in returns
- vii Fast and Efficient

Tax periods are set according to the needs of the business and the department. One is required to file in a return so that VAT can be accounted for at the correct time. To evaluate the effectiveness of ETRs in fulfilling this objective, it was found that the use of ETRs was not a waste of funds and has assisted businesses in many ways. The ETRs also don't break down too often. Further the introduction of ETR has assisted in reducing costs that the business used to incur in processing VAT; ETRs have really helped increase profits due to their efficient nature, and lastly the introduction of ETR has assisted ease the work of processing VAT returns.

5.2.2 Possible solutions to the problems encountered in processing of VAT returns using Electronic Tax Registers

The KRA has articulated a vision for Kenyan customs, and in the process of delivering such mandate, it has faced challenges while meeting its pillars that include: Building the capacity to carry out its responsibilities in a fast changing global environment; Better synergy and cooperation between customs, and customs and other government agencies, intergovernmental organizations and the private sector; A commitment to good governance; and promoting intra-African trade and investment.

Of the few (34%) businesses who indicated that they have not benefited from the use of ETRs, cited the following reasons ranging from:

- i The ETRs do not suit their kind of business
- ii The ETRs give inaccurate records and results for businesses that engage in field sales
- iii The ETR Machine is not applicable to service providers
- iv Some businesses previously had point of sale software that did all calculations

Some of the recommendations, made by the registered VAT taxpayers, to the Kenya Revenue Authority (KRA) regarding Electronic Tax Registers included:

- i ETRs are expensive, acquisition costs should be paid in instalments
- ii ETRs should be compatible with computers used in business premises
- iii ETRs should be free since they benefit both the government and the businesses in revenue collection.
- iv KRA should introduce ETRs that can handle field sales.
- v KRA should introduce cheaper ETRs

- vi KRA should introduce ETRs that have less rates of breakdowns
- vii KRA should reimburse servicing expenses incurred by businesses to repair ETR machines.

5.3 Conclusions

Based on the results from data analysis and findings of the research, one can safely conclude the following;

First, Kenya has witnessed significant changes in many aspects of its economy over the last four decades, but like most developing countries, it has had to contend with the common problems that plague tax systems of developing countries (Karingi, Wanjala, Dec, 2005). ETRs have been introduced to free the country of problems that plague its tax system. From the research data, most businesses (91%) have acquired ETR machines, which were acquired more than two years ago; an indication that most businesses in Kisii town have complied with the VAT requirements in Kenya. But most businesses (55%) have not received any refund which takes less than one month. Indeed these refunds are on the premise that equipment necessary for automation may include new or rehabilitated offices, hardware, software, internal communication systems and connections to external networks, and they may also require the set-up of wireless networks and links.

Secondly, the timely filing of the monthly VAT returns is attributed to many factors. ETR is one of the factors. Most businesses indicated that timely filing of VAT returns was attributed to the adoption of the ETR machine. The use of ETR machines has also led to improved sales audit for the business, since everything that is VAT-able is captured to record. This is an indication that indeed the use of ETRs has improved sales audit on top of timely filing of monthly VAT returns. The frequency of sales auditing has reduced to daily, giving prompted sales patterns and feedbacks. Stock taking is the act or process of inventorying merchandise or the supplies on hand (Christensen, 1997), as it was found that the use of ETRs has improved stock taking in addition to timely sales audit.

Thirdly, on the effectiveness of Electronic Tax Registers in processing of Value Added Tax returns; Electronic tax Registers reduce the tax-reporting burden on businesses while improving the efficiency and effectiveness of government operations, provides timely and accurate tax information to businesses, increases the availability of Electronic Tax filing, and models simplified state tax employment laws. It was found that ETRs have enhanced the revenue collection resulting from sound sales and stock audits. Thus most businesses

(66%) qualified the use of ETRs in businesses to have accrued many benefits to their businesses, citing the following reasons ranging from: Increased efficiency in sales audit; Increase in sales collection; Increased efficiency in stock-taking; Easy VAT Processing leading to less risks of prosecution; ETRs have led to timely preparation of reports; ETRs have led to increase in returns, and that they are fast and efficient.

Fourthly, KRA requires VAT registered businesses to complete VAT returns at regular intervals. These tax periods are set according to the needs of the business and the department. One is required to file a return so that VAT can be accounted for at the correct time. To evaluate the effectiveness of ETRs in fulfilling this objective, it was found that the use of ETRs was not a waste of funds and has assisted businesses in many ways. The ETRs also don't break down too often. Further the introduction of ETRs has assisted in reducing costs that the businesses used to incur in processing VAT; ETRs have really helped increase profits due to their efficient nature, and lastly the introduction of ETR has assisted ease the work of processing VAT returns.

Lastly, KRA has articulated a vision for Kenyan customs, and in the process of delivering such mandate, it has faced challenges while meeting its pillars that include; Building the capacity of customs to better carry out its responsibilities in a fast changing global environment; Better synergy and co-operation between customs, and customs and other government agencies, intergovernmental organizations and the private sector; A commitment to good governance; and promoting Intra-African trade and investment. Of the few (34%) businesses who indicated that they have not benefited from the use of ETRs, cited the following reasons; the ETRs do not suit their kind of businesses; the ETRs give inaccurate records and results for businesses that engage in field sales; the ETR Machine is not applicable to service providers; and some businesses had already had point of sale software that did all the VAT calculations.

5.4 Recommendations

The findings of this study indicate that there are a number of issues to be addressed and suggestions for further research.

5.4.1 Recommendations for Improvement

The following challenges need to be addressed by the KRA: the cost and classification of the businesses which need to use ETRs.

This can be achieved if the following can be done in order to fully reap the fruits and benefits of ETRs: ETRs are expensive, cost to be paid in instalments; ETRs should be compatible with computers used in business premises; ETRs should be free since they benefit both the government and the businesses in revenue collection; KRA should introduce ETRs that can handle field sales; KRA should introduce cheaper ETRs; KRA should introduce ETRs that have less rates of breakdown; KRA should educate business people and customers on ETRs; KRA to introduce different systems for different businesses; and lastly, KRA should reimburse servicing as well as repairing expenses.

5.4.2 Recommendations for Further Research

Areas of further research that were identified include; a similar study to be carried out on other lucrative towns, A study on ETRs' effectiveness by businesses and the benefits or challenges encountered and how efficient the ETRs help the businesses in filing VAT returns. Further research should be conducted to determine how ETRs contribute to a business' financial performance and how such a performance can be measured.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER TO THE RESPONDENTS

**EGERTON UNIVERSITY,
KISII TOWN CAMPUS,
P.O. BOX 408,
KISII.
5TH FEBRUARY 2007.**

Dear Sir / Madam,

RE: MBA PROJECT

I am a postgraduate student pursuing an MBA degree course at Egerton University. I am conducting a research on “**AN ASSESSMENT OF THE EFFECTIVENESS OF ELECTRONIC TAX REGISTERS IN PROCESSING OF VALUE ADDED TAX RETURNS BY REGISTERED VAT TAXPAYERS**” in Kisii Municipality. Be assured that any information you will give will be solely used for the research and under no any circumstances will it be disclosed to anybody else.

Your co-operation will be highly appreciated.

Thank you.

Yours,

.....
Bernard M. Obongo

.....
Mr. Lumumba Martin

MBA STUDENT / RESEARCHER

SUPERVISOR

APPENDIX II: QUESTIONNAIRE

Please fill in the following questionnaire as accurately as possible. Any information given will be treated confidentially.

PART 1 A

Put a tick (√) in the appropriate box or fill in the blank spaces as required.

1. Age of your business

Over 5 years old

Between 3 and 5 years old

Less than 2 years old

2. Type of business

Supermarket

Wholesaler / Large scale retailer

Service provider

3. Have you acquired an ETR machine?

Yes

No

If yes, when did you acquire it?

More than 2 Years ago

1 -2 years ago

Less than 1 year ago

4. Have you got a refund of your initial cost?

Yes

No

If yes, how long did it take before you were refunded?

More than 2 years

1 -2 years

Less than 1 year

If No, how long do you think it can take?

In 2 Years' time

In less than a year's time

In less than 1 month's time

No idea

5. Approximately what percentage of your total monthly VAT returns is equivalent to the cost of the ETR machine?

- More than 50%
- Between 30% and 50 %
- Between 10% – 30 %
- Less than 10%

6. Approximately what percentage of your total monthly VAT returns is equivalent to the costs incurred in processing of VAT using the ETR machine?

- More than 5%
- Between 3% and 5 %
- Between 1% – 3 %
- Less than 1%

7. Approximately how long does it take you to prepare your VAT returns at the end of the month?

- More than 3 days
- Less than 3 days
- Less than 2 days

8. Do you employ services of tax agents?

- Yes
- No

If yes, what proportion of your monthly VAT returns do you pay them?

- More than 30%
- Between 20% and 30%
- Between 10% and 20%
- Less than 10%

If No, do you pay overtime wages to those who prepare them?

- Yes
- No

9. Have you ever been late in filing your monthly VAT returns?

- Yes
- No

If yes, by how many days?

- More than 10 days
- Between 5 and 10 days
- Less than 5 days

If No, can this be attributed to the use of your ETR machine?

Yes

No

10. In your own view has your ETR machine assisted you in your sales Audit?

Yes

No

If yes, how often do you do your sales Audit?

Monthly

Weekly

Daily

If No, how often do you do your sales audit?

Monthly

Weekly

Daily

11. Does the ETR machine make your stock taking easier?

Yes

No

If yes, how often do you take your stocks?

Monthly

Weekly

Daily

If no, how often do you take your stocks?

Monthly

Weekly

Daily

12. Have you encountered any breakdown of your ETR machine?

Yes

No

If Yes, move to questions 13, 14 and 15; If No, ignore questions 13, 14 and 15.

13. How long did the breakdown last?

- Over 6 hours
- Between 4 to 6 hours
- Between 2 to 4 hours
- Less than 2 hours

14. Approximately how much did the repair cost your business?

- Over Kshs. 5,000
- Between Kshs 1,000 and Kshs 5,000
- Less than Kshs 1,000

15. Did you inform KRA about the breakdown?

- Yes
- No

If yes, what actions did they take?

- Refunded the costs of repair
- Asked for a claim form
- No action yet

16. Have you had an increase in revenue collection since you started using ETRs?

- Yes
- No

17. Averagely, has your monthly VAT returns increased since you started using ETRs?

- Yes
- No

PART 1 B

Answer the following questions as briefly as possible

18. Do you think the introduction of ETR has assisted your business in any way? Give reasons for your answer.

19. What suggestions would you make to the Kenya Revenue Authority (KRA) regarding Electronic Tax Registers?

PART 2

Tick the appropriate box in each column corresponding to each statement.

	STRONGLY AGREE (1)	AGREE (2)	NOT SURE (3)	DISAGREE (4)	STRONGLY DISAGREE (5)
1) The introduction of ETR has assisted ease the work of processing VAT returns.					
2) The introduction of ETR has assisted in reducing costs that the business used to incur in processing VAT.					
3) ETR was a waste of funds and has not assisted the business in any way.					
4) ETRs break down too often.					
5) ETRs have really helped increase profits due to their efficient nature.					