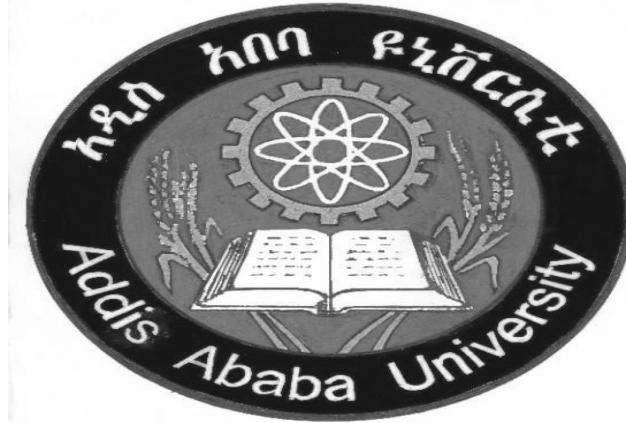


**The impact of Electronic Tax Register on Value Added Tax: on the case of  
Addis Ababa City**



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**The impact of Electronic Tax Register on Value Added Tax: on the case of  
Addis Ababa City**

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June, 2011  
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**Addis Ababa University**  
**School of Business and Public Administration**  
**Department of Accounting and Finance**

**The impact of Electronic Tax Register on Value Added Tax: on the case of  
Addis Ababa City**

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## Declaration

I, Yalemtesfa Taye , hereby declare that the thesis work entitled “**The impact of Electronic Tax Register on Value Added Tax: On the case of Addis Ababa City**” submitted by me for the award of the degree of Master of Accounting and Finance of Addis Ababa University at Addis Ababa Ethiopia, is original work and it hasn't been presented for the award of any other Degree, Diploma, Fellowship or other similar titles of any other university or institution.

Place: *Addis Ababa*

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Date: *June, 2011*

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## CERTIFICATION

I certify that the thesis work entitled “**The impact of Electronic Tax Register on VAT Income**” is a genuine work of Mr. Yalemtesfa who carried out the research under my guidance. Certified further, that to the best of my knowledge the work reported herein doesn't form part of any other project report or dissertation on the bases of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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## Acronyms

Electronic Tax Register Machine (Cash register machine).....ETR

Value Added Tax.....VAT

Ethiopia Revenue Customs Authority.....ERCA

Goods and services tax” ..... GST

Turn over tax.....TOT

Tax Identification Number.....TIN

## **Abstract**

This study aimed to assess the effectiveness of Electronic Tax Registers (ETRs) in the processing of Value Added income. The study sought to determine the effect Electronic Tax register effect on administration cost and compliance cost, the extent of tax evasion while using ETRs and audit follow up effects. The study sought to establish if the Electronic Tax Registers had increased the speed at which taxpayers processed their VAT returns and if there were any associated costs in the processing of VAT. The population under study encompass of 3000VAT registered, 11 ETRs experts and ultimate tax payers with no limited number of people in Addis Ababa City.

The main instrument of collecting primary data was the questionnaires while secondary data was obtained from the Ethiopia Revenue Customs Authority (ERCA). Analysis of data was done using multiple regression and descriptive statistics. The findings of this research are ETRs has a positive effect on VAT returns and others independent variables has a significant effect on VAT income except compliance cost.

## **Chapter One**

### **1. Introduction**

Value Added Tax (VAT) is a tax on the value added to goods and services by enterprises at each stage of the production and distribution processes. It arises whenever a “taxable person” makes a “supply of goods or services” in the course of his business. Thus, in some countries, it is called “goods and services tax” or GST. Value added tax (VAT) was invented by a French economist in 1954 by Maurice Laure, director of the French tax authority. Value added tax was invented because very high sales taxes and tariffs encourage cheating and smuggling (Worku, 2008).

One of the mechanisms in which countries raise revenue to finance government spending on the goods and service that most of government uses as tool taxation. As compared to the developing countries, the developed countries have been able to generate substantial revenue through imposing of taxes. One of the reasons for this has been the efficient tax system operating in the developed countries unlike the developing economies which are characterized by weak monetization and the low development of the formal sectors. In other words, these countries have employed tax systems that have one or a combination of the following desirable characteristics as economic efficiency, administrative simplicity, flexibility, political accountability and fairness. The tax system need to be economically efficient meaning the tax system should not have an impact on the allocation of resources. The tax system countries should be adopts easy and inexpensive to administer and that should be able to respond to changing economic circumstances. Taxpayers should also be able to determine what they are actually paying so that the

political system can more accurately reflect the preferences of individuals (Abraham Tesfaye,2003).

It follows that optimality in a tax system requires absence of distortion in any economic activity( Hancock, 1995 ). It is expected that people's tax payments is in line with their income and they are required to pay a tax in proportion to their level of income. On the part of the tax collectors, collection of tax should be time conscious and convenient and the cost of collecting the taxes should not be high to discourage business. Alternatively, this means that the ideal tax system in developing countries should raise essential revenue without excessive government borrowing and should do so without discouraging economic activity and without deviating too much from tax system in other countries ( Tanzi, 2001).

Considering the significance of VAT administration, many studies have been conducted in some developing and transitional countries with respect to the main VAT administration tasks and its problem. These studies include (Abraham, 2003),( Herouy, 2004), (Kerver,2008), ( Clement,2009) ,(Wollela A.,2008). These papers assessed the VAT administrators in developing and transitional countries problems and prospects of implementing VAT in Ethiopia and others developing countries. This paper will assess the effect of cash register machine (technology) on VAT collection in Ethiopia revenue and Customs authority and it will forward some recommendation for this organization since it apply new system to collect VAT.

This paper was examined about the impact of Cash register machine (Electronic Tax Registers (ETRS)) on V AT collection in Ethiopia at Addis Ababa city. The remainder of

the paper is organized as follows. The next part discuss about the statement of the problems ,objectives of the study, literature review ,methods and methodology of the study, data analysis and result presentation and conclusions and recommendations.

## **1.1 Statement of problems**

As per Kerever (2008) Special characteristics of African VAT is the degree to which implementation of the VAT has exposed the need for broader institutional transformation and modernization of revenue administrations. Africa countries necessitate having modern VAT collection and Revenue regulations system via technology. The tax authorities can also face a problem that while it transform the administration activities from traditional economies through to globalized and electronic transactions in the same marketplace. And finally, authorities have found that VAT poses unique challenges in African economies in which commercial arrangements range from traditional economies through to globalised and electronic transactions in the same marketplace.

So, because of modernization on value added tax collection would face some challenges and opportunities that can face African countries as per the above person finding. Currently, Ethiopia is administrating its revenue and tax collection by using technology. Since 2009 the Ethiopian Revenues and Customs Authority adopt digital cash register machine on collection of VAT, TOT and Business Income tax. Therefore, since cash register machine is a result of modernization(technology) the tax administrator may face different challenge as well as opportunities.

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).

Evans (2003) modern taxation systems have the capacity to impose a heavy burden on taxpayers, and particularly on small business taxpayers. That burden typically consists of three elements. In the first place there are the taxes themselves, whether they are taxes on the profits, the products or the employees. Secondly, there are the efficiency costs (variously referred to as deadweight losses or excess burden), involving tax-induced market distortions. And finally there are the operating costs of the tax system: the costs to the government (ultimately borne by taxpayers) of administering and collecting the taxes (usually referred to as “administrative costs”), and the costs expended by taxpayers in complying (or sometimes not complying) with their tax obligations (usually referred to as “compliance costs”).

The Ethiopian government has initiated a number of processes. These include the design and computerization of the taxpayer registration process; the operational development of taxpayer services activities, return process and debt and audit activities; publicity campaign and taxpayer education. These measures are expected to improve the government’s revenue position (As Herouy cited, from Africa Development Bank, 2003).



In 2009 the Ethiopian government knows that using technology for collection of tax can enhance the government's revenue position as well as reducing the degree of tax evasion.

Most countries jurisdictions tax law requires customers to collect the receipt and keep it at least for a short while after leaving the shop, so, it is better using cash register machine is very important in order to easily provide receipts for the customers while the business sells products or services accordingly the tax law, again to check that the shop records sales, so that it cannot evade sales taxes. (<http://www.wikihow.com/Use-a-Cash-Register>) Here, we can see that using cash register machine can reduce the extent of tax evasion by allowing the business records.

As per Ainsworth (2011) every VAT regime is susceptible to missing trader fraud. The fraud is simple and can be easily prevented with the right technology. Therefore, by using technology tax authority can reduce the degree of tax fraud.

Therefore, this paper was deals with the opportunities and problems of ETRs on VAT income in Addis Ababa city. Even though, there are many research conducted by different researcher, they doesn't discuss about the impact of technology on VAT income in Ethiopia. So the researcher tries to bring fruitful work on this area since it is new system in Ethiopia.

There has been a considerable growth in the usage of tax administration software and in the outsourcing of tax processes to external advisers throughout the world. According to Guyton et al. (2005) the share of self prepared tax returns without software in the U.S.

dropped between 1993 and 2003 from about 41% to 13%, while the paid preparer use rose from 51% to 62%.

## **1.2 Objective of the Study**

The study has both the general and specific objectives have been achieved on this study.

### **1.2.1 General Objective**

- The main objective of the study is to assess the impact of Cash register machine (Electronic Tax Registers (ETRs)) on value added tax collection in Addis Ababa City.

### **1.2.2 Specific Objectives**

The general objective split in different specific objectives

- To see the ETRs effect on income from Value added tax
- To measure the effect of ETRs on tax evasion
- To see the effect of ETRs on compliance cost and
- To see the effect of ETRs on administration cost

## **1.3. Hypothesis development:**

- The researcher developed the following hypothesis to test the factors that are affecting VAT income while implementing cash register machine in the assumption that the Beta ( $\beta$ ) for these factors is zero. This means that for testing purpose, the researcher began by hypothesizing that the VAT income and awareness about cash register machine and VAT, VAT evasion while using cash register machine, Audit follow up ,compliance cost and administration cost are

insignificant to affect the VAT income, therefore the null hypothesis and alternative hypothesis was stated as indicated here followed:

- Ho: Awareness of people about cash register machine, Audit follow up , Evasion ,compliance cost and administration cost does not have a significant effect on VAT income.
- H1: Awareness of people about cash register machine, Audit follow up , Evasion ,compliance cost and administration cost have significant effect on VAT income.

#### **1.4.Scope of the study**

In assessing the revenue of the government from the value added tax using technology that is cash register machine. Therefore, the study focus on the revenue of government from value added tax in Addis Ababa targeting the advantages and disadvantageous of the cash register machine on VAT collection.

#### **1.5.Limitation of the Study**

The study has some limitation that not explores all the existing information. Since it focuses on the impact of cash register machine on VAT collection which is a new phenomena in Ethiopia, there is no ample studies on cash register machine in Ethiopia, thus there will not be sufficient background information that highly support the study. Therefore the availability of relevant data will influence the study. Since the study needs sufficient data to attain its objective it needs huge amount of fund to collect and analyze the data. Thus the lack of finance and time was the other constraint to conduct the study.

### **1.6. Significance of the study**

This study would provide a significant role to identify the benefits and challenges of ETRs while the business using in it and the benefit that the government is getting out from this machine. The study also would have helps to know the problems and prospects of technology on VAT. Moreover the study has seen how the tax authority collects VAT by using cash register machine. In addition to this the study may become useful for further study to those who want to undertake more research in this area.

## **Chapter Two**

### **2. Literature review**

Although, very few literature exist on the subject of VAT and about Cash register machine in less developing countries by different groups of scholars and academicians the researcher try to get crucial literature in relation with the title.

The chapter is organized in three sections. The first section discuss reviews theoretical studies on the impact of cash register machine on VAT income while the second section presents the empirical evidence on the impact of cash register machine on VAT income and related issue. The final section presents knowledge gap on the review of literature and that will be addressed in this study.

### **2.1 Theoretical Studies**

#### **2.1.1 Overview of VAT**

A VAT is a tax on consumption while people are consuming services or goods from VAT registered organization. It is not a tax on business. It is charged on the value of imports and on the value added (mark-up) on goods and services supplied by one business to another or to the final consumer. VAT is a general consumption tax assessed on the value added to goods and services. It is a general tax that applies, in principle, to all commercial activities involving the production and distribution of goods and the provision of services. It is a consumption tax because it is borne ultimately by the final consumer. It is not a charge on companies. It is charged as a percentage of price, which means that the actual tax burden is visible at each stage in the production and distribution chain. It is collected fractionally, via a system of deductions whereby taxable persons (i.e., VAT-registered businesses) can deduct from their VAT liability the amount of tax

they have paid to other taxable persons on purchases for their business activities. This mechanism ensures that the tax is neutral regardless of how many transactions are involved (Herouy, 2004).

VAT is an indirect tax that is broad based (levied at multiple stages of the distribution chain) with the provision for businesses to offset the tax paid on their own purchases of goods and services against the tax charged on sales of goods and services.

The tax will be levied:

- On imports,
- Transactions between businesses,
- Transactions between businesses and the final consumer and
- Transactions with the Government

### **2.1.2 Historical Background of VAT**

VAT has spread throughout the world since its introduction in 1955. Its format has changed and now incorporates what was once an offshoot - "GST" (goods and services tax). France is credited with first implementing VAT. It did so in 1955. The tax spread through Europe, South America and parts of Africa in the 1960s and 1970s before taking a hold in other regions. For example, the tax spread throughout the South East Asia/Pacific region from 1984 (Indonesia) to 1999 (Australia). Today, over 128 countries have the tax. All members of the OECD and all leading economies in the world have a VAT (or very broadly comparable tax), apart from the US. For most of the twentieth century, the principal federal tax on individuals in the United States has been on income, whether it is earned from labor (wages and salaries) or capital (interest, dividends, and capital gains). But a growing number of economists and politicians have concluded that

the United States should replace the income tax-partially or entirely- with a tax on consumption. Most of the political debate over a consumption tax has centered on whether the United States should adopt VAT similar to the ones that European countries have. While a VAT definitely is a tax on consumption, it is not the kind that most consumption –tax advocate prefer. What’s more, the debate over whether to add a VAT to the U.S. tax code has obscured the more basic issue of whether to tax income or consumption. Every Member State of the European Union has a VAT. The First VAT Directive of April 11, 1967 (as amended) required that Member States replace their general indirect taxes by a common system of value added tax. In fact, the assessment base for the Member States' VAT constitutes one of the critical components of "own resources"-the EU's budgetary revenue. Yet the laws establishing the VAT are national laws, each framed within certain parameters specified by the EU in the Sixth Council Directive 77/388/EEC (as amended) on the common system of VAT and the uniform basis for its assessment. This Sixth VAT Directive aims to ensure that each Member State has a broadly identical "VAT base"- VAT levied on the same transactions. Its subsequent amendments have attempted to remove anomalies (Herouy, 2004).

### **2.1.3 VAT Development in Ethiopia**

The Ethiopian government has introduced VAT as part of the overall tax reform program. The tax reform program is preceded by establishment of a new Ministry of Revenue as a first step to improve tax collections and to combat fiscal fraud. Various activities have been conducted subsequent to this : the increase in the sales tax and the removal of import duty surcharge in 2000; a new legislation on presumptive taxation and a 5 percent withholding tax on imports became effective in February 2001; legislation was approved

in March 2001 to introduce the TIN system to reinforce the collection powers of revenue agencies, and a tax reform implementation task force was established; a large taxpayer was made operational in July 2001; in October 2001, a draft VAT legislation was submitted to parliament and this is approved and implemented beginning January 1, 2003. A revised income tax law has been approved and made operational. This revised law includes enhanced enforcement procedures and an improved penalty regime, with a view to increasing the efficiency of income tax collection, and ensuring the recovery of income tax arrears.

Prior to the introduction of VAT, the Ethiopian government has initiated a number of processes (Africa Development Bank, 2003). These include the design and computerization of the taxpayer registration process; the operational development of taxpayer services activities, return process and debit and audit activities; publicity campaign and taxpayer education. These measures are expected to improve the government's revenue position.

Weak tax administration stems from a number of interesting factors: overly complex and outdated tax laws and procedures, weak or outdated operating and management information systems, poorly trained staff, low remuneration packages for civil servants, bureaucratic civil service procedures, poor infrastructure and equipment and corruption and political interference in tax administration.

### **Tax Reform**

Tax reform includes changing policies to address insufficient revenue, to correct distortions that reduce economic welfare and growth, or measures to reduce inequities.

The tax reform program in Ethiopia has two components: overhauling of the tax



legislation and improving the tax administration. The reform aims at establishing a sustainable domestic revenue base, encouraging trade and investment, ensure fairness, equity and transparency in the administration of the tax laws ([www.eluntazo.com](http://www.eluntazo.com)).

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Tax policy reforms focus on improving the efficiency and equity of the income tax system, modernizing tax administration by enhancing technical capacities and reforming indirect taxation and the tax authority can increase its efficiency. The main reform to indirect taxation, therefore, using technology is enhancing the efficiency of the authority.

The tax system reform project aims to create a tax system that is more supportive of private sector development, improving revenue collection system and ensuring equity and fairness of the tax system. The tax reforms that have been initiated will lay the foundations for a strengthened revenue base.

### **Operation Costs**

At first blush, it may appear to be relatively simple to identify both administrative costs and compliance costs relating to taxation. The former set of costs might be thought of as those costs borne by the public sector, and which would not have been incurred if the tax did not exist (or, alternatively stated, would disappear if the tax were to be abolished) (Sandford, Godwin and Hardwick, 1989, p. 3). By way of contrast, compliance costs are private sector costs, and again, simply stated, they comprise the costs to taxpayers and third parties “in meeting the requirements laid upon them in complying with a given structure and level of tax” (Sandford, Godwin and Hardwick, 1989, p. 10).

But first impressions can be misleading, and the literature reveals that there is some degree of uncertainty about the precise definitions of these terms, and the manner in which they are expressed for comparative purposes. As Sandford, Godwin and Hardwick

note “complexities and inter-relationships make it difficult if not impossible to define the various costs with absolute precision or in a neat, mutually exclusive way...” (1989, p.3).

### **Administrative costs**

Allers (1994, p. 19) defines administrative costs as “costs incurred by the tax authority or (mainly) public sector agents in order to administer the tax-benefit system”. He then goes on to note that “it is not immediately obvious, exactly, which activities should be attributed to the operation of the...system” (p. 19). For example, should the costs of the legislation itself, or the costs of legal disputes, be included within the measure of administrative costs? And how are the costs of some very other obvious elements (such as the depreciation of buildings and other physical infrastructure) to be measured?

According to Allers (1994), administrative costs clearly include the costs of running and maintaining revenue agencies, including salaries of staff, pensions relating to those staff, together with accommodation and office expenses for revenue department staff. Less obviously, administrative costs can also include the costs of legislative enactment relating to the tax system, from initial policy formulation through to statutory or other rule enactment. They can also include the judicial costs of administration of the tax dispute system, which may involve local and national tribunals and – at the extreme – the courts themselves. Also, accounting practices may differ. For example, whether capital costs such as the installation of computers are included in a single year’s costings or spread over their expected effective life; and whether the annual value of buildings owned by the

government is included at all, at a nominal figure, or at an opportunity cost for accounting purposes.

Typically, it has been common practice in the literature to restrict administrative costs to the costs that relate to the running of the revenue departments, but there is no inherent reason (other than simplicity of measurement and availability of relevant statistics) why this should be the case. Certainly, there are strong grounds for including legislative and juridical costs in calculations of administrative costs where they are available and where they clearly relate to the governmental costs of administering the tax system. And ultimately, the decision as to what to include or exclude from administrative costs is largely dependent on the availability of data, usually from governmental sources.

### **Compliance costs**

There is also uncertainty about what should be included in the measurement of taxation compliance costs. Tax compliance costs are those costs “incurred by taxpayers, or third parties such as businesses, in meeting the requirements laid upon them in complying with a given structure and level of tax” (Sandford, Godwin and Hardwick, 1989, p. 10). Whilst this is an area in which there will always be debate, it is possible to identify a “hard core” of costs that are indisputably part of the costs of complying with taxation requirements. Typically these will include:

- The costs of labor/time consumed in completion of tax activities. For example, the time taken by a business person to acquire appropriate knowledge to deal with tax

obligations such as Pay As You Earn (“PAYE”) or VAT; or the time taken in compiling receipts and recording data in order to be able to complete a tax return;

- the costs of expertise purchased to assist with completion of tax activities (typically, the fees paid to professional tax advisers); and
- incidental expenses incurred in completion of tax activities, including computer software, postage, travel etc.

### **Tax awareness and reforming tax administration**

In order to establish the most effective and revenue generator tax administrations do not develop overnight. Administrative reforms through involve changes in incentives and in the behavior of taxpayers and public officials. (Turley and Schaffer,2001)

#### **2.1.4 VAT Introduction Ethiopia**

The most straightforward way of taxing only expenditure is through an indirect tax, such as VAT(Hancock,1995). The newly introduced VAT is one of the components designed by foreign and local experts to improve the tax collection and administration system in Ethiopia. The new tax system is invoice based, and thus required a complete revamp of the way businesses was conducted in this country. This new tax system is believed to encourage savings, export and capital accumulation as it is levied on goods and services meant for consumption.

The VAT was projected to be applicable on taxpayers that meet the minimum threshold of 500,000 Birr and above in annual turnover, but will be required to effect 15 percent tax every transaction.

## **How does the tax work?**

The classic ingredients of VAT are:

- The tax is charged on certain transactions such as the sale of goods, the provision of services, and other types of supplies.
- It is charged at each stage of the production and distribution chain by businesses and other persons carrying on a continuous or taxable activity.
- Such businesses do not incur the cost of the tax - they simply ensure that it is charged when they supply a commodity (collecting the tax on behalf of the Revenue) and claiming a credit from the Revenue for tax paid on their business inputs.
- Specified supplies are charged at the rate of 0% or are exempt from the tax. Zero -rated businesses can claim a credit for VAT paid on inputs, exempt businesses cannot.
- The cost of the tax is therefore borne by businesses, which make exempt supplies, and by unregistered end consumers. Both parties pay the tax when acquiring commodities but are unable to claim a compensating VAT credit.

These then are the characteristics of value added tax regimes. Minor variations occasionally apply. In Canada and Australia, for example, exempt financial entities can claim a partial VAT credit on certain expenses.

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the way businesses was conducted in this country. This new tax system is believed to encourage savings, export and capital accumulation as it is levied on goods and services meant for consumption.

The VAT was projected to be applicable on taxpayers that meet the minimum threshold of 500,000 Birr and above in annual turnover, but will be required to effect 15 percent tax every transaction.

### **Tax Evasion**

Tax is a method of saving tax liability by a tax payer through fraudulent means or by directly violating tax laws. It usually entails tax payers deliberately miss representing or concealing the true status of their affairs to the tax authorities to reduce their tax liability.

Tax evasion is illegal, unethical, uneconomical and highly risky since it may result in may result in penalty, imprisonment and closing up of business. Hence, taxpayers shall find all the legal ways to avoid paying too many taxes and by no means is tax evasion acceptable to a government because it criminal activity.

#### Techniques of tax evasion

The following are some of the common tax evasion techniques:

- Omission to report taxable revenue to tax authority;
- Under invoicing of sales revenue;
- Overstatement of tax deductible expenses;
- Reporting of personal expense as business expense for tax purposes;
- Suppression of incomes;

- Keeping multiple set of books of accounts to record business transaction; etc.

Factors that cause tax evasion

The following are the important causes for tax evasion:

a) High rates of taxation

Prevalence of high rates is the first and foremost reason for tax evasion. This is because (1) the higher rates of taxation create a psychological barrier to greater effort and undermine the capacity and will to save and invest; and (2) higher tax rates results in heavy tax burden and the greater the risk undertaken for the purpose of tax evasion, the greater is the reward.

b) Complexity of tax laws

Complicated tax laws are another factor for tax evasion. Complex tax procedures involves lot of time, cost seeking the assistance of tax experts and their advice by taxpayers. Such complication in tax laws may lead the taxpayers for evasion.

c) Sharing of experienced personnel

Shortage of experienced personnel is yet another cause of tax evasion. Tax Authorities should have sufficient number of trained and experienced personnel to cope with assessment and investigation work.

d) Deterioration of moral standards

Every person should realize his responsibility towards the government. However, in this modern competition world, the deterioration of moral standards among the people leads to falsification of accounts, misrepresentation of facts and fraudulent



behavior.(Misrak, 2008, Ethiopian Tax Accounting Theory and Practice ,PP 49-51)

### **Introduction of tax automation and advantages**

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).

### **2.2 Theoretical Review about cash register machine**

A cash register is an electronic tool used to calculate and record sales transactions with a cash drawer that will be used to store cash. This machine will automatically print receipt after a certain amount and the money transactions compared to the manual transaction of sales. There are different types of cash register but they usually have the same key and functions. (<http://www.wikihow.com/Use-a-Cash-Register>)

The early cash registers recorded the amount of each sale upon a paper roll, but provided limited help in the way of transaction summaries. The following advertisement in 1886

touted the virtues of the cash register: "It is an automatic cashier which records mechanically every sale made in a store. It never tires. It never does one thing while thinking of another, and never makes a mistake. It is a mathematical prodigy in brass and steel, all of whose computations are invariably correct. It is a machine which will save the money you make and thus pay for itself over and over again."

### **2.2.1 The History of Cash Registers**

One of the earliest inventions for keeping track of commercial transactions is the abacus, an instrument that helps a person make arithmetic calculations. Invented over 4500 years ago in the mid-east, it was further developed by the Egyptians and Chinese into its present form. A variety of different abacus designs exist. The word "abacus" comes from the Greek *abax*, meaning "counting board." The device has other names in Asian languages. Cash registers today mechanically implement many of the functions of the abacus.

In ancient times the abacus was composed of a row of grooves in sand into which pebbles were placed. Later, the use of a slate or a board made it a portable device, widely used throughout Asia. Today, it is composed of beads strung on parallel wires in a rectangular frame, and is still in use where electricity and batteries are scarce or expensive. For example, a Russian version, the *schoty*, was still in widespread use within the last decade.

The abacus works on the principle of place-value notation: the location of the bead determines its value. In this way, relatively few beads are required to depict large numbers (Companion,1996)

### 2.2.2 Empirical review

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.

Omweri and Bernard (2010) assess the effectiveness of Electronic Tax Registers (ETRs) in the collection of VAT returns. The study measured the problems of using Cash Register Machine facing tax payers and tax collectors as well as get possible solutions to the problems . And the study also assess the effectiveness of Electronic Tax Registers had been recently introduced by the Kenyan tax authority. The study sought to establish if the Electronic Tax Registers had increased the speed at which taxpayers processed their VAT returns and if there were any associated costs in the processing of VAT. The population under study comprised of 98 VAT registered taxpayers in Kisii town according to the regional KRA office's records. The researcher stratified the population (VAT registered organizations) under the study in to four different groups at the point of their activities .That are; service providers, wholesalers & large scale retailers and supermarkets. The researcher uses primary and secondary data and the main instrument of collecting

primary data was the questionnaires while secondary data was obtained from the KRA regional office. Data was analyzed mainly done using descriptive statistics sorted and summarized in tables and diagrams. 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, they 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). Secondly, the timely filling of the monthly VAT returns is attributed to many factors. ETR is one of the factors. Further the introduction of ETR has assisted in cutting costs that the business used to incur in processing VAT. Thirdly, It was found that ETRs have enhanced the revenue collection resulting from sound sales and stock audits. Fourthly, to evaluate the effectiveness of ETRs in filling VAT Returns at regular intervals, it was found that the use of ETRs was not a waste of funds and has assisted the business in many ways.

Gang And Das-Gupta (1998) ,extends the standard theoretical model of tax enforcement by allowing for the cross- matching of transactions in addition to the auditing of taxpayers. For the Value Added Tax (VAT) the matching of purchase and sales invoices is an important enforcement technique. The paper examines the impact such enforcement on the revenue effectiveness and efficiency consequences of the VAT. Transactions matching is shown to have very different effects from auditing: Even when auditing alone is unable to induce non-zero taxpayer reports, and regardless of the expected success rate in auditing of the tax administration, sufficiently intensive cross- matching can induce

truthful reporting. On the other hand, matching leads to distorted purchase and sales transactions. It can also distort input use and output decisions even if auditing alone has no adverse effects. In the model, conditions under which the VAT leaves input prices undistorted are found and the content of the often made claim, that a VAT is self-enforcing, is explored. The ability of the tax administration to enforce compliance with the VAT is shown to be sensitive to the knowledge that the tax administration has about the production technology.

The findings of Schaffer and Turley (2001) on their study measuring effective tax administration in transition economies (TE) revealed that Wide differences between effective or realized average tax rates, and tax yields that would result if statutory tax rates were strictly applied indicate problems with tax compliance and collection. . The methodology involves calculating an effective/statutory (E/S) tax ratio. Initial results indicate that the leading TEs have E/S ratios similar to the EU average. They find a positive correlation between progress in transition and effective tax administration, as measured by our E/S ratio. For slow reformers, the effectiveness of tax collection appears to vary with the extent of state control. Those TEs that have maintained the apparatus of the state have done well in tax collection compared with those countries where there is evidence of state decay. This raises a number of broad policy issues relating to the speed of transition, the interaction of politics and economic reforms, the capacity of the state to govern, and the need for market institutions to develop.

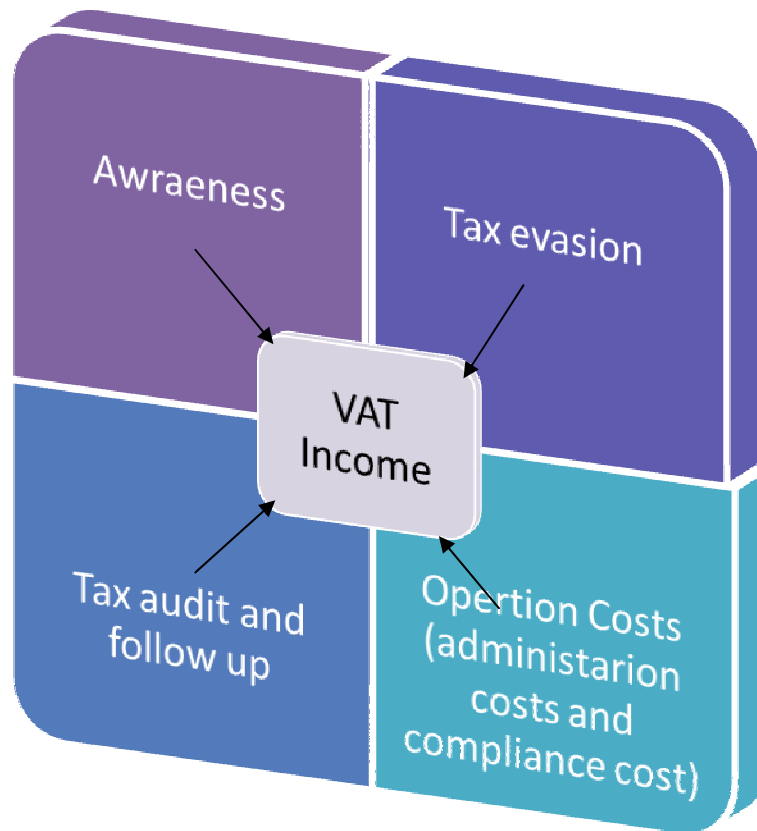
Eichfelder and Schorn,(2009), analyzed the relationship between tax compliance costs and business strategy. They applied a German data set of 1,220 especially small and medium-sized businesses to investigate this hypothesis in an econometric WLS model.

They find no similar cost-reducing effect for capital-intensive compliance strategies (for example the use of tax administration software), an electronic data interchange with the tax and social insurance authorities or a simplified cash accounting method for tax purposes. The insignificance of electronic submission methods may be caused by start-up costs counterbalancing potential cost reductions. relationship of tax compliance costs and business strategy. Due to instruments, like information technology, simplified cash accounting or outsourcing compliance activities to tax advisers, private businesses have a set of strategies to optimize their tax compliance cost burden. In spite of that they found empirical evidence for small German businesses using only insufficiently the support of external tax advisers. Therefore, a considerable number of small businesses in Germany could reduce their compliance cost burden by a higher degree of outsourcing tax processes. In contrast, they found no significant evidence for a cost reduction by an electronic data interchange with the tax and social insurance authorities or by a simplified cash accounting method for tax purposes. The insignificance of electronic submission methods may be caused by start-up costs counterbalancing potential cost reductions.

### 2.3 Conceptual frame work of the researcher

From the above literature review the researcher tries to drive variables from the above literature based on the title.

#### 2.3.1 Conceptual frame work from the literature review



**Diagram 2.1.** The researcher design this diagram by own self from the literature review

The researcher will see different issue in this study, the issue explained by classifying and considering them as dependent and independent variables .The variables relationships are explained (shows) as follows .The dependent variable is VAT income while the independent variables are awareness of ultimate tax payers and VAT registered organizations, tax evasion, tax audit and follow up, compliance cost and administration cost. In this case the dependent variable affected by these independent variable, for instance, VAT income affected(increase or decreases) by awareness of taxpayers ,that means when the tax payers awareness is high about value added tax , the value added tax income will increase assume others things are constant. The dependent variable also will be affected by tax evasion ,that means when there is a way or no way to evade tax while using cash register machine the value added tax income also decrease or increase. When we see the relationships between VAT income and tax audit follow up there is high relationship affected the VAT income because of this variable. For instance, when the tax authority have a usual tax auditing the organization accounting information the extent of evasion may deduct because of fearing ,so, the VAT income will increase because of reducing the evasion through tax audit.

In general, it can be concluded that although there have been studies on VAT Administration and VAT implementation and its problem in some developing countries including in Ethiopia, in Ethiopia there are no ample studies that examine the impact of cash register machine on VAT income since it is new technology which adopted by Ethiopian Revenue and Customs Authority. Therefore, since it is new system which adopted by the tax authority there is no clue about the exact figure whether there is



opportunities or problems of cash register machine on VAT collection process. In this proposal, the objectives of the studies are to examine the impact of cash register machine on VAT collection and to identify the problems and opportunities of the machine on the process of VAT collection.

## **Chapter Three**

### **3.1 Research design and methodology**

In order to achieve the main research objectives a mixed methods approach (both quantitative and qualitative) is adopted. The purpose of using such a mixed methods approach is to gather data that could not be obtained by adopting a single method and for triangulation so that the findings with a single approach could be substantiated with others wherever possible. The idea of Mixed approach methods is supported by different scholars by mentioning its advantageous over using a single method.

A mixed methods approach is one in which the researcher tends to base knowledge claims on pragmatic grounds (e.g., consequence-oriented, problem-centered, and pluralistic). It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problem. The data collection also involves gathering both numeric information (e.g., on instruments) as well as text information (e.g., on interviews) so that the final database represents both quantitative and qualitative information (Creswell, 2003).

A basic description of a mixed methodology is simply that it is a methodology with methods that have comparisons between quantitative and qualitative data (Jones, 2004). Quantitative data is data in numerical form, often derived from questionnaires or structured interviews. Qualitative data is descriptive data from observation or unstructured interviews (Taylor et al., 1995 p632).

The separation of methodologies into quantitative and qualitative is a common distinction; the tendency has been to link quantitative methods with a natural science (positivist) and qualitative methods with a social science (interpretivist) (Mingers, 2001). However, this simple distinction has caused much debate concerning its accuracy and validity. In the first place, the distinction can be argued to apply to the data rather than the methodology (Yin, 1989) and also that the underlying paradigms are incompatible. On this latter point, there is a view within social research that the two are equally informing (Bryman, 2001). A brief explanation about each of the main data collection methods adopted is given below.

### **3.1.1 Types and sources of data**

In this study, the researcher were used primary and secondary data. The primary data obtained from three different population by stratified them based on their basic features , that are: from the ultimate tax payers (consumers of vat registered organizations’), from the Value added tax registered organizations and from tax experts and administrators by using different mechanisms, in order to obtain information from the above population that has been mentioned in the above sentence ,the researcher used structured questionnaire to gather primary information. Questionnaires have been administrated open ended and closed ended types of questionnaires.

Whereas, the secondary data obtained from Ethiopian Revenues and customs Authority Western and Eastern Addis Ababa branch from published and unpublished reports, documents and internet site.

### 3.1.2 Method of data collection

Sampling is important because, in almost all cases, it is not practical to study all the members of a population (Vanderstoep,Johnston,2009). In a population of several thousand a sample of a few hundred can be representative and (especially in self-completion surveys), researchers can ‘over-sample’ to compensate for non-response. In groups likely to be under-represented additional ‘booster samples’ can be taken (Williams,2003). A common goal of survey research is to collect data representative of a population. The researcher used information gathered from the survey to generalize findings from a drawn sample back to a population, within the limits of random error (Wunsch, 1986).

Within a quantitative survey design, determining sample size and dealing with non response bias is essential. “One of the real advantages of quantitative methods is their ability to use smaller groups of people to make inferences about larger groups that would be prohibitively expensive to study” (Holton & Burnett, 1997, p. 71). The traditional method of increasing reliability of estimates is to increase sample size. But increasing the sample size has its own problems as reported by (Bakan,1966).

So, the researcher determines the sample size and gathered representative information by stratified the population based on special features, since the researcher have three different population. The first population, that is value added tax registered organization in Addis Ababa, the sample size determined by a mathematical formula that take from statistics book by taking into account the total population(definite number of population), the sampling error, the level of reliability and the population proportion. Adequacy of the

sample size and cost took into consideration in the sample size plan for the study. Currently, the value added tax registered organizations in Addis Ababa are 3,000 organizations as a total population and it is assumed that the sample should have 98% reliability and a sampling error of 2% or 0.02.

The maximum sample size is computed as follows:

Therefore,  $n = \frac{N}{1+p*N} = \frac{3000}{1+(3,000*0.02)} = 50$

Where **N** is desired population

**n**: is sample size

**p**: is margin of error and which

The information gathered through closed ended and open ended questionnaires from these 50 VAT registered organization by using simple random sampling, cause the population homogeneity based on the researcher information need.

The researcher gathered information almost from half of a Cash register machine experts from those who work at Addis Ababa City, because ,according to some research books when the population is very small it is better to take large sample in to account as participant .There are 11 cash register machine experts. The researcher gathered information from 6 of them through closed ended and open ended questionnaire and interview to get vital information which are viable for the study.

The researchers also determine the sample size from the third population that is the ultimate taxpayers, in this case the ultimate tax payers (consumers from VAT registered organization) population size is not available in this case statistical books recommend to

use multistage sample technique .As per Jakson, 2007, "multistage cluster sampling is used when an appropriate sampling does not exist or cannot be obtained." This author recommended ,because of this multistage process, the likelihood of sampling bias increases. This creates a lack of sampling precision known as a design effect. It is recommended to consider the design effect during sample size determination. So, the researcher will take 50 sample by using random sampling from the infinite population in order to avoid design effect and due to time and budget constraints. Beside, the researcher was administered closed ended questionnaire to gather information from the ultimate tax payers.

### **3.1.3 Dependent and independent variables of factor considerations**

Dependent variables in the study are the VAT income of the ERCA (the total money collected by the government from VAT) .The amount of VAT income is depend up on the following independent variables such as: awareness of the people on VAT and CASH register machine ,VAT evasion while using cash register machine ,administration cost of the government to collect VAT by using ETRs, compliance cost (a cost that is incurred by the VAT registered organizations to collect VAT and a tax returns and audit follow up taking place by the ERCA while on a VAT registered organization (user of ETRs) .

The relationships between the dependent variable and independent variables can be explained ;

VAT income = Awareness of the people about VAT and ETRs+ VAT evasion + Administration cost + Compliance cost+ Audit follow up

**Ordinary Least Square (OLS) model:** By using OLS model it was constructed as follows:

$$\text{VAT income} = \beta_0 + \beta_1 \text{Awareness} + \beta_2 \text{Evasion} + \beta_3 \text{Administration cost} + \beta_4 \text{Compliance cost} + \beta_5 \text{Audit follow up} + \text{error factor } (\varepsilon)$$

Where: VAT income = VAT income while the government using ETRs,

$\beta_0$  = constant term

$\varepsilon$  = acceptable error factor

**Note:  $\varepsilon$  = the change of VAT returns because change on the businesses efficiencies and effectiveness, and other factors other than independent variables.**

### 3.1.4 Method of Analysis

In order to analyze the data, both descriptive and inferential statistics were used. Tabulation, percentages etc. were used to analyze data which gathered from cash register machine experts and from ultimate consumers. On the other hand, inferential statistics were used to see the association between the dependent variable and the independent variables. The dependent variable is VAT income and the independent variables that are compliance costs while using cash register machine, tax audit follow up and awareness about cash register machine and about VAT. So, in order to see the relationships between the dependent variable and independent variables multiple regressions were used to see the relationships between the dependant variable and independent variables. In addition, collinearity taste were made to check interdependence and collinearity among

independent variables multiple regression, collinearity and descriptive statistics was applied using procedures within Statistical Package for Social Sciences (SPSS)\_PC version 16.



## Chapter Four

### 4.1 Data Analysis, Findings and Discussions

In this study, both primary data and secondary data were collected by the researcher. Primary data was collected by use of questionnaires. The questionnaire was 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 ERCA's office by analyzing 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. Raw data collected from the field was sorted and summarized 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 responses from the open-ended questions were coded; the mean and standard deviation used for likert-scale responses. Content analysis was also used in the analysis of some of the open-ended questions.

This section discuss on data analysis, results and discussions of the research. Data was collected from three different population and out of the total population the sample sizes are 50 VAT registered organizations in Addis Ababa city, 50 consumer of VAT registered organizations and 8 cash register machine experts of ERCA. The respondents of VAT registered organizations were senior, middle level, low managers. Out of the 50 registered VAT taxpayers to whom the questionnaires were administered, only 38 responded. This gives a response rate of 76% percent. All of the 50 consumer of VAT

registered organizations to whom questionnaires were administered by random sampling and there were no sampling error. This gives a response rate of 100% percent. And out of the 8 cash register machine to whom the questionnaires were administered, only 6 responded . This gives a response rate of 75% percent.

#### **4.1.1 Descriptive Analysis**

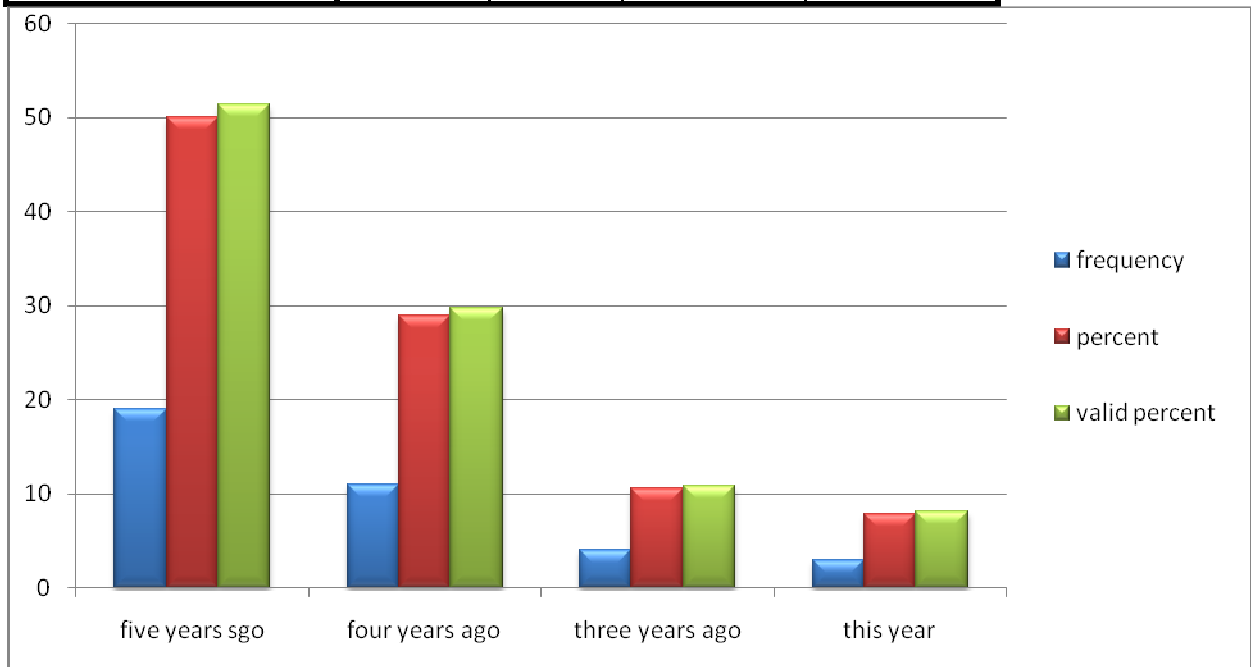
This section present on descriptive analysis of the primary data which were collected from VAT registered organizations, ultimate tax payers and from ETRs machine experts.

##### **Business Profile & Background Information**

The years that has been organizations in operation determines the experiences of the old VAT collection system and new VAT collection system in filling its tax returns is relevant information which can able the business organizations to evaluate the existence VAT collection system by making comparison with the previous one. So, in order to get this essential information the respondents were asked to give the age of their businesses, and the age of their businesses on VAT collection without electronic register machine and with electronic register machine.

**TABLE 1: Time starting collection of VAT before ETR**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	five years ago	19	50.0	51.4	51.4
	four years ago	11	28.9	29.7	81.1
	three years ago	4	10.5	10.8	91.9
	this year	3	7.9	8.1	100.0
	Total	37	97.4	100.0	
Missing	System	1	2.6		
Total		38	100.0		

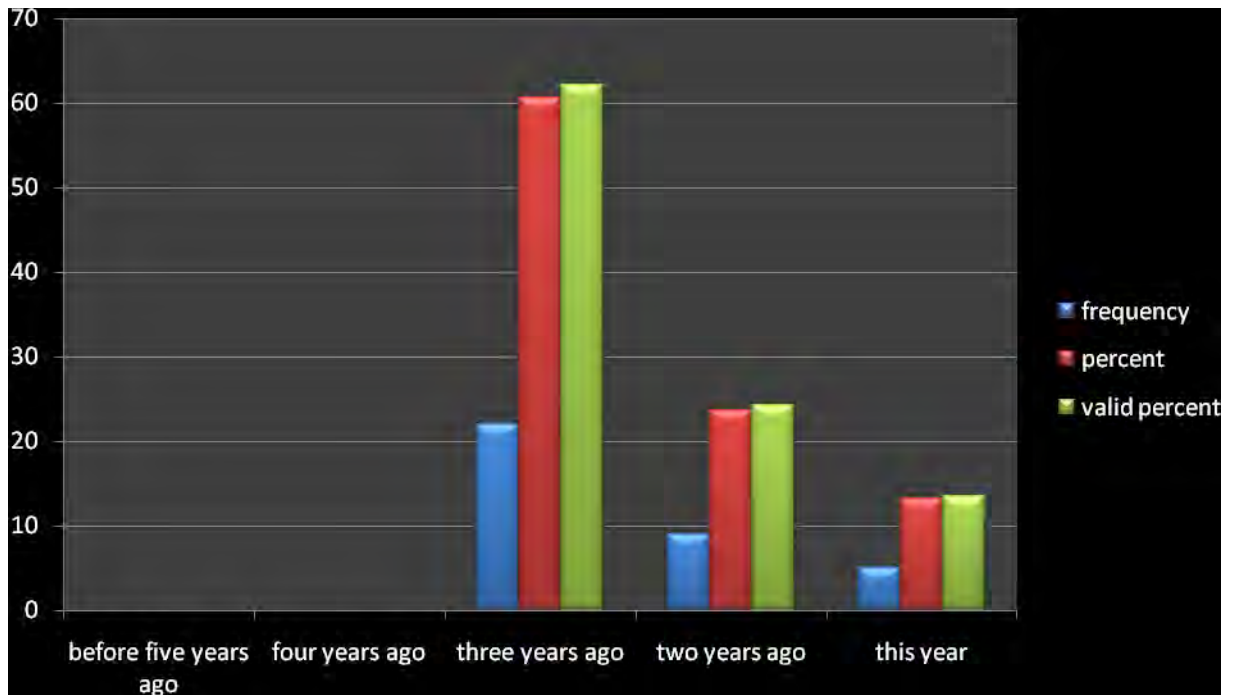


**Graph 1: Time starting Collecting VAT before ETR**

As we can see the above table 1 and figure 1, the respondents were asked to give the age of their businesses, and from the research data, it was found that most businesses have been in operation for more than five years, that is 50% of the businesses have been in operation for over 5 years, This indicates that almost half of the respondents are well experienced which can able them measure the old tax system and the new one that is automated tax system while 28.9% of them have been in operation for between 4 and 5 years, and 10.5% of the business have been in operation before two years ago and the remaining started in this year.

**Table 2: Time starting collection of VAT by using ETR**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid before five years ago	0	0	0	0
four years ago	0	0	0	0
three years ago	22	60.6	62.1	91.9
two years ago	9	23.7	24.3	86.5
this years	5	13.2	13.5	100.0
Total	36	97.4	100.0	
Missing System	1	2.6		
Total	37	100.0		



Graph 2: Time starting collection of VAT via cash register machine

The above table and graph shows that, the respondents 60.6 % of VAT registered organization have been collecting VAT through cash register machine for over three years that was the time when cash register machine uses to collect VAT in Ethiopia. And 24.3% respondents have been collecting VAT via cash register machine. The remaining organizations started using cash register machine.

This is an indication that the information provided in this study was given by experienced businesses and informants. The registered VAT taxpayers in Addis Ababa city are 3,000 in number as provided by the ERCA office. Out of 3,000 only 37 VAT registered organizations responded. There are three categories of registered VAT taxpayer; service providers; merchandises enterprises and Manufacturing enterprises. The respondents were asked to indicate the type of business they are engaged in, and it was found that

35% of the businesses were service providers , 50% merchandise enterprises, and 15% were manufacturing enterprises. Currently, Ethiopia is moving to modern tax systems by adopting Electronic tax registered 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 get the country out of the problems that plague tax systems of developing countries. The ERCA give permission different whole seller to distribute a cash register machine with free duties in order to built modern tax system. ERCA also requiring all businesses organizations to uses cash register machine and a cost that has incurred by the organizations to acquire the machine, hardware, software, internal communication systems and connections to external networks, and they may also require the setup of wireless networks and links is a deductible expense. They were also asked to indicate the time when they might have acquired the ETR machines, and most businesses acquired their ETR machines, that 60.6 % of VAT before three years ago that was the time when cash register machine uses to collect VAT in Ethiopia. And 24.3% respondents have been acquired more than two years ago, the remaining organizations acquired in this year.

#### **4.1.2 VAT Returns, the ERTs Machines and VAT registered organizations**

The ERCA requires to use every business organizations using ETRs and 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. The respondents were asked to indicate percentage of the business' total average annual VAT returns specifically they were asked year 2007 before cash register machine implementation and VAT returns and

year 2008 after cash register machine implementation to make comparison. The researcher tries to see the relationship between the dependent variable that is VAT income and independent variables that are: awareness about VAT and ETR, audit follow up on VAT and cash register machine and compliance costs while the business using machine to collect VAT by using multiple regression. However, using VAT income in terms of money (birr) to regress is not the right way to see its effect because of those independent variables therefore; the researcher took percentage change of VAT income before using ETRs and after ETRs.

The respondents were asked to indicate the time they take to prepare their VAT returns at the end of the month, and 60.2% of the businesses take less than 2 days to prepare their VAT returns at the end of the month, 22% indicated less than three days, as 18.8% indicated more than three days. This is an indication that the businesses prepare and file their VAT returns in good time before the ERCA deadlines of VAT returns submission time. Businesses sometime seek the involvement of tax accountants' services in filling tax returns and with a proportion of the proportion of the monthly VAT returns paid to the agents. The respondents were asked to indicate whether they involve the tax accountants' services in filling tax returns to check the extent of compliance costs after using ETR, and 70% of the respondents indicated that they don't involve the tax accountants' services in filling tax returns. Of the 30% who involve the tax agents' services in filling tax returns. 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 because the ETRs facilitates tax returns filling process.

The taking part of a tax accountant in the preparation and filling of the monthly VAT returns can involve a fixed fee or a variable fee. The respondents were asked to indicate whether they pay wage to the tax accountants in the preparation of VAT returns, and they were asked about the costs that has been pay wage by the business before ETRs and after ETRs to make comparison and, 85% of the respondents who involve tax accounts in the preparation of VAT returns is paying less amount of wage to the tax accountants than before ETRs. 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 68% of the respondents part indicated that the use of ETR machines has led to improved sales audit for their business, as 32% indicated it has not improved. This is a sign that certainly the use of ETRs can improve sales audit on top of timely filling of monthly VAT returns. Also from the results, out of the 68% who enjoy the benefits of ETRs in sales audit, 52% of the businesses are able to conduct their sales audit daily. Especially the owners of the businesses are getting a means of controlling their business sales volume daily via mobile phone. The respondents were asked to indicate whether they have enjoyed any benefits in the faculty of collecting VAT and handling their Owen work through the adoption of ETR machine, and 72% of the respondents indicated that the use of ETR machines has led to sound reappraisal of their business work and collection of VAT , as 22% indicated it has not improved help their work and collection of VAT rather it put on them additional burden on them like they are threatened to not committing a mistake while using ETR because once they make a mistake it has a long step to make it correct and it take time. This is an indication that in fact the use of ETRs has improved collection of

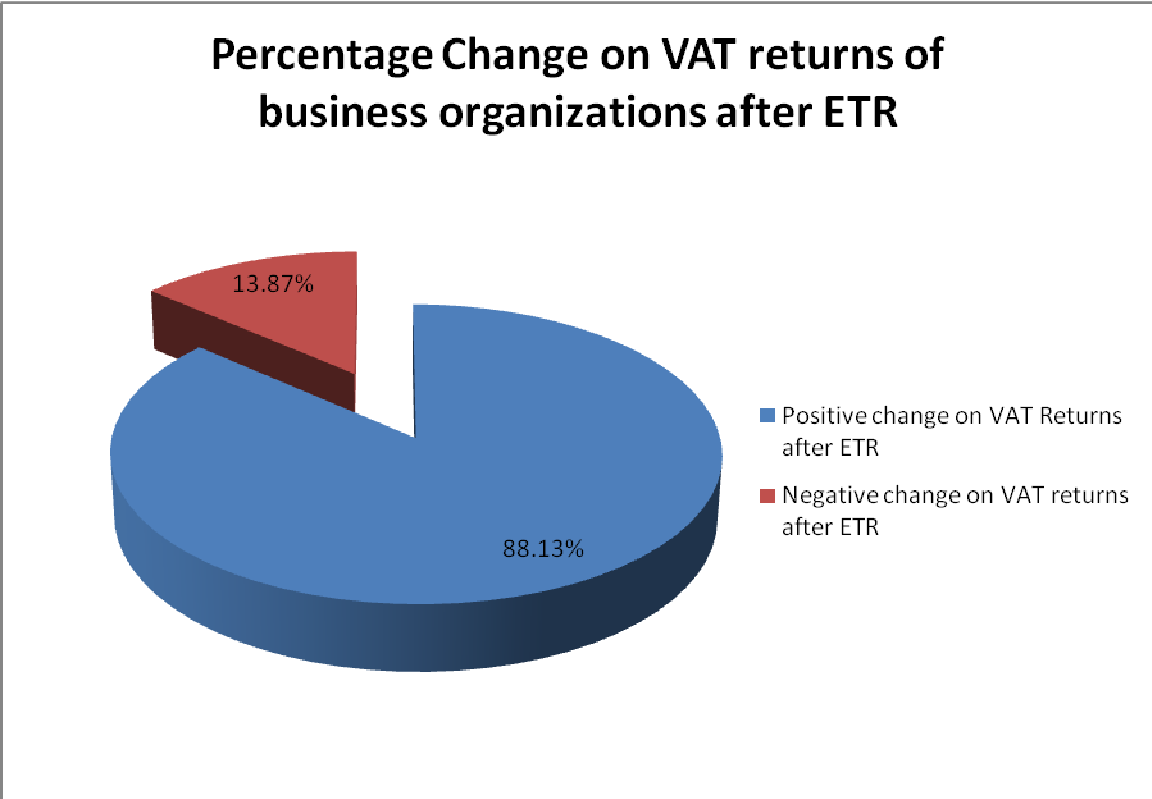


VAT and the business work in addition to controlling the business activities with regard to cash sales.

### **Change of VAT returns after ETRS**

The researcher gathered data from ERCA and the VAT registered organizations VAT returns of the same organizations to measure the change of the government income from VAT after a cash register machine implementation. The data shows that collected VAT income in year 2007 that means before cash register machine is Birr 607,432,706.25 from 101 VAT registered organizations and the government collect Birr 890,290,805.42 in year 2008 after cash register implementation from this 101 organizations. The net percentage change of VAT returns before cash register machine and after cash register machine was positive change that is 46.57% from these 101 organizations. When we see the maximum positive percentage change of VAT returns from one specific organization is 467.71% and the maximum negative percentage change for another specific organization is -95.19%. This shows that there is a positive impact of a cash register machine because its positive impact is very larger than its negative impact. By looking at individual business organization percentage changes VAT returns, concluding the results is very difficult so the researcher tried to see the all businesses net effect of the cash register machine from specific sample. Out of 101 organizations 87 organizations showed the positive changes and only 14 organizations a negative percentage changes after a cash register machine. That means 86 .13% of the businesses returns more VAT than before using a cash register machine.

The change of VAT returns can be summarized by the following pie chart.



**Chart 1: Change on VAT returns of business organizations after ETR**

Even though, there are a big changes in VAT returns comes to ERCA after implementation of a cash register machine the researcher believe that it is not possible to conclude by looking only these evidences. So, in order to get strong result we have to see the cause and effect relationships by regressing the percentage change on VAT returns (dependent variable) and independents variables.

## 4.2 Regression results

The researcher tried to see the relationships between the dependent variable that is VAT income and the independent variables to be regressed by using SPSS that are only : awareness , audit follow up and compliance cost. The researcher has reason regressing only those three independent variables. Firstly, due to information availability which could gather from the VAT registered organizations, the respondents could ask only about their awareness, the procedure and their perception of audit follow up and compliance costs. Whereas information about the remaining independent variables that are evasion and administration cost are not available from VAT registered organizations. And also the researcher took the change of VAT registered organizations of their VAT payment after they are using ETR machine, so, the dependent variables considered in terms of percentage changes.

### 4.2.1. Model fitness and Regressions

**Fitness of the model:** the use of OLS (Ordinary Least Square) is used for this study and the regression result showed that the model work well. Before regressing the data the researcher checks multi collinearity among the independent variables. The following table showed that the multi collinearity test.

**Table 3: Correlations**

		total awareness per respondent	total compliance per respondent	total audit follow up per respondent
total awareness per respondent	Pearson Correlation	1	.853**	.651**
	Sig. (2-tailed)		.000	.000
	N	37	37	37
total compliance per respondent	Pearson Correlation	.451**	1	.868**
	Sig. (2-tailed)	.000		.000
	N	37	37	37
total audit follow up per respondent	Pearson Correlation	.756**	.868**	1
	Sig. (2-tailed)	.000	.000	
	N	37	37	37

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

The result of correlations showed that there are no multi collinearity because according to Hair et al.1998 if pearson correlation results showed that from 0.3 to 0.9 there are no multi collinearity, that means we can regresses the dependent variable and independent variables.

The test for this model is made by  $R^2$  and F-statistics.  $R^2$  indicates that how much is the total independent variable explained the dependent variable. As we can see from the following table (Table 7 model summary),the result of  $R^2$  showed that all independent variables explained the dependent variables with 81.9% and which confirm that the model is good. The F statistics result also support the above conclusion, except one independent variable all are significant at 5% level. The calculated F statistics is 49.669

which are higher than the tabulated F statistics which is 8.6. Therefore the F statistic proofs that the selected model is best fit.

**Table 4: Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.905 <sup>a</sup>	.819	.802	46.28249

a. Predictors: (Constant), total awareness per respondent, total compliance per respondent, total audit follow up per respondent

b. Dependent Variable: percentage change of vat collection after using cash register machine

#### 4.2.2 Regression results and interpretations:

Regression shows that how the dependent viable is responding with independent variables change. The VAT income which is dependent variable is a function of these independent variables that are audit follow up, compliance cost and awareness. Regression can show us the fitness of the model and significant variables that affect VAT income.

**Table 5: ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	319180.132	3	106393.377	49.669	.000 <sup>a</sup>
	Residual	70688.286	33	2142.069		
	Total	389868.418	36			

a. Predictors: (Constant), total awareness per respondent, total compliance per respondent, total audit follow up per respondent

b. Dependent Variable: percentage change of vat collection after using cash register machine

**Table 6: Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
1 (Constant)	-57.453	52.332		-1.098	.280			
total audit follow up per respondent	-16.601	7.653	-.564	-2.169	.037	.806	-.353	-.161
total compliance per respondent	-2.589	2.366	-.095	-1.094	.282	.365	-.187	-.081
total awareness per respondent	20.763	3.852	1.470	5.390	.000	.890	.684	.400

a. Dependent Variable: percentage change of vat collection after using cash register machine

**Significant variables:** Audit follows up and awareness

Insignificant Variable: Compliance cost

As we can see from the above regression table 7, VAT income is highly affected by audit follows up and awareness at 5% significance level and less likely affected by compliance cost at 10% significance level.

The coefficient or probability value of awareness is 0.001 which means that the null hypothesis that is awareness does not affect the VAT income is rejected at 1%

confidence level and the alternative hypothesis that is the awareness affects the VAT income is accepted at 99% confidence interval. The beta coefficient of awareness is positive 20.763. This showed that as awareness increases the VAT income percentage increase. That is as awareness increases the VAT income increases by 20.763 of awareness. This is the reason that the people are creating awareness and more become aware about what the governments is requiring them and also people know the punishment that will resulted because of lately payment or trying to cheat the VAT payment.

#### **4.2.3 The Effectiveness of Electronic Tax Registers in Processing of Value Added Tax Returns**

Cash register machine decreases the tax returns load on businesses while it enhances the collection processes efficiencies and effectiveness of the ERCA, and provides timely and accurate tax information to businesses, increases the availability of electronic tax filing, and models simplified state tax employment laws. The respondents were asked to indicate whether monthly VAT returns have increased with the implementation of ETRs and from the results, 89% of the respondents indicated that the monthly VAT returns have increased with the implementation of the ETRs. These questions also were asked the cash register machine experts whether the ERCA VAT revenue increased with the implementation of ETRs, 100% of the respondents indicated that the monthly VAT income of the tax authority increased. Thus the ETRs are effective in the VAT returns documentation. 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, 72% of the respondents qualified the use of ETRs in business to have accrued many benefits to their businesses, as opposed to 28% who indicated they have not enjoyed any benefits by



the use of ETRs. Of the 72% who indicated that they have yielded the benefits of ETRs, they cited the following reasons ranging from: Increased efficiency in sales audit, increase in sales collection processes, decreases the amount of compliance cost in terms of money and time, ETRs have led to timely preparation of reports, ETRs have led to Increase in returns, it give additional means to control over the day to day activities of their Owen business and assets of the business.

Of the 28% who indicated that they have not benefited from the use of ETRs, cited the following reasons ranging from: it is not friendly usable when the cashier made a mistake while collecting cash, it takes time for a correction of mistakes, the tax laws threatened the business if thee made any mistake unintentionally it might considers as tax evasion, when the business serve money customers at a time it make late and most customers are blaming for their service qualities.

In conclusions the benefits, ETRs allows the businesses to report their VAT returns with in a time and it helps them in filling real data with regard to VAT and sales of the business of the ERCA. To evaluate the effectiveness of ETRs in fulfilling this objective, the respondents were asked different questions to evaluate the use and challenges of ETRs . and the results of the of descriptive analysis and multiple regression analysis are show us it was found that the use of ETRs reduces the cost of VAT registered organizations and administration costs and has assisted the business in many ways.

#### **4.2.4 VAT Returns and ETRs experts**

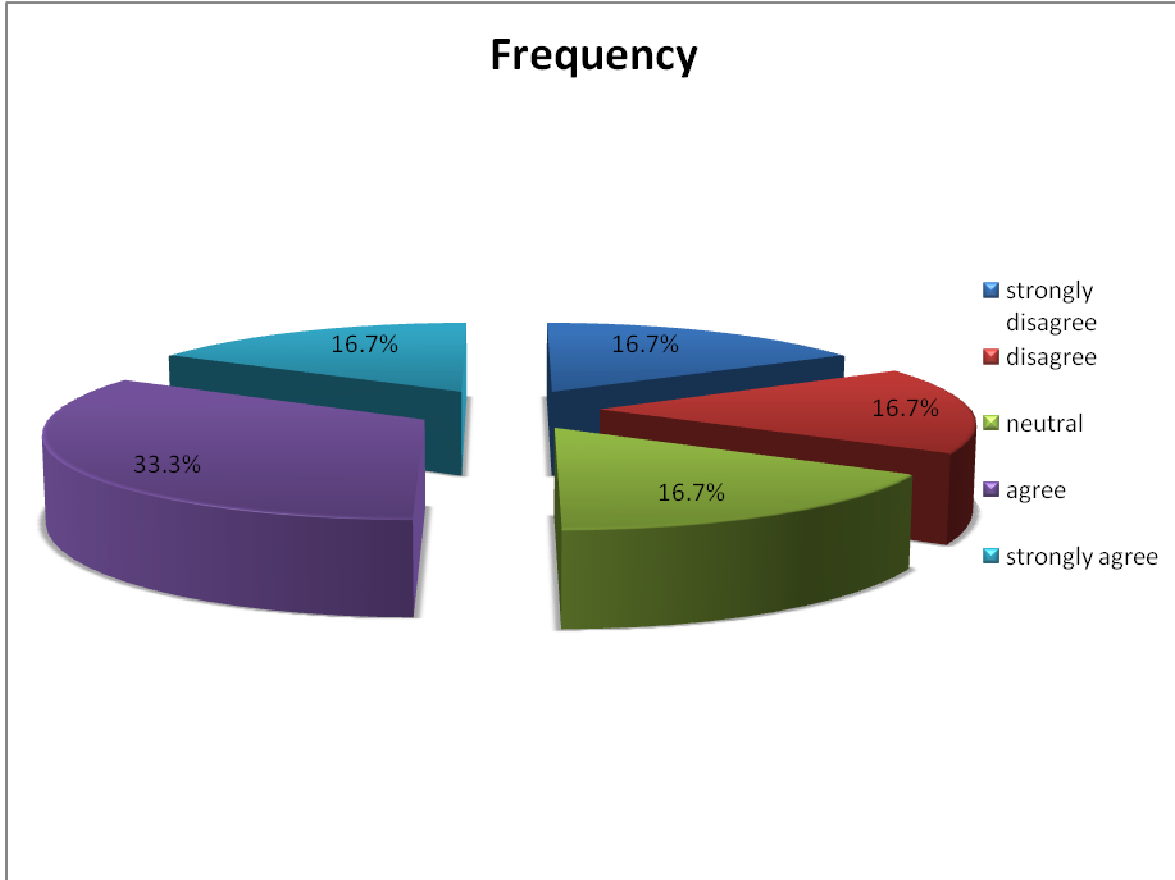
ERCAs' cash register machine experts were asked information with regards to: about awareness creations about cash register machine and VAT take place by ERCA, about the role of cash register machine on reducing evasion and administration cost, audit follow

up practice of ERCA. The total number of a cash register machine experts are 11 out of these the researcher distributed questionnaires for 6 experts. The questionnaires were designed to answer their agreement level. There are five agreements level that the respondent can choice from the given agreements level that are: 1 “Strongly disagree”, 2 “Disagree”, 3 “Neutral”, 4 “Agree” and 5 “Strongly agree”.

The ETRs experts were asked whether ERCA gave training and creating awareness about usage and benefit of cash register machine, so, it can be summarized by the following table and graph.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly disagree	1	16.7	16.7	16.7
Disagree	1	16.7	16.7	33.3
Neutral	1	16.7	16.7	50.0
Agree	2	33.3	33.3	83.3
strongly disagree	1	16.7	16.7	100.0
Total	6	100.0	100.0	

**Table 7: Does ERCA gave training about usage and benefit of cash register machine?**



**Chart 2: Does ERCA give you enough training about usage and benefit of cash register machine?**

As we can see the above table and figure the respondents gave their opinion about whether ERCA gave enough training about the benefit and usage of cash register machine. Out of 6 respondents 1 or (16.7%) of them strongly disagree, 1 or (16.7%) of them disagree, 1 or (16.7%) of the neutral, 2 or (33.3%) of them agree and 1 or (16.7%) of them strongly agree that ERCA does gave enough training to VAT registered organizations and to the people who are consumer of the VAT registered organizations.

**Cash register machine experts’ opinion about ETRs benefit**

The cash register machine experts were asked different questions with regards to a cash register machine benefit from different aspects. The respondents were asked whether a

cash register machine facilitate VAT collections process or not. The following table shows the respondents opinions about cash register machine benefits.

**Table 8: using a cash register machine facilities VAT collection process**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Agree	2	33.3	33.3	33.3
strongly agree	4	66.7	66.7	100.0
Total	6	100.0	100.0	

As we can see the data on the above table the respondent indicate that their agreement level with the questions of “using cash register machine facilitates VAT collection process” Out of 6 respondents 4 or 66.7% of them strongly agree that the cash register machine can help and facilitates a VAT collection process and the remaining 2 or 33.3% also agree with the above statements. That means all experts no doubt that a cash register machine can facilitate the VAT collections process. So, there is a possibility of cost reduction on tax administration cost since ETR is helping the tax authority in collection process.

The cash register machine expert also asked the effect of ETRs on administration cost and its effectiveness on VAT administration.

**Table 9: Using cash register machine can reduce administration cost**

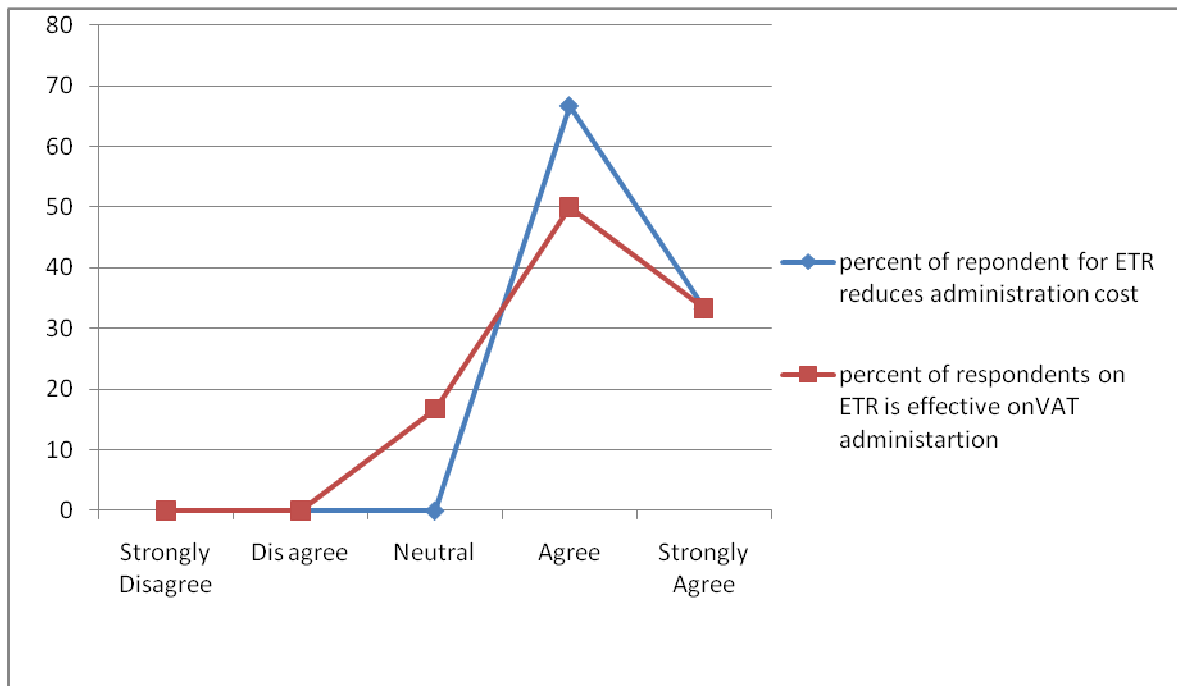
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Agree	4	66.7	66.7	66.7
strongly agree	2	33.3	33.3	100.0
Total	6	100.0	100.0	

**Table 10: Cash register machine is effective on vat administration**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	1	16.7	16.7	16.7
Agree	3	50.0	50.0	66.7
strongly agree	2	33.3	33.3	100.0
Total	6	100.0	100.0	

According to the cash register machine expert opinions which presented in the above two table, 4 or 66.7% of respondents agree and 2 or 33.3% respondents strongly agree that the administration cost which is incurring to collect and administrating cost of VAT reduces after implementation of ETR. And a cash register machine expert also asked that how ETR is effective on VAT administration. Out of 6 respondents 3 or 50% of them agree, 2 or 33.3% of them strongly agree that ETR increased the effectiveness of VAT administration the remaining one is neutral.

**Bar Chart 1: Opinion on Efficiencies and Effectiveness of ETR**



So, from the above results we can conclude that administration cost of the government to administrate VAT collection decreases after implementation of ETRs that means indirectly there are possibilities of VAT income increases since these two elements have a negative relationship. The respondents indicates that the ETRs helps the government through different aspects: provides timely and accurate tax information to businesses, increases the availability of electronic tax filing .To have accurate tax data and filling a tax information timely via electronically

### **ETRs with tax evasion**

The cash register machine experts were asked about the ETRs role on tax evasion. The respondents were asked whether a cash register machine can reduces the extent of tax (income and VAT) evasion and the loophole of tax fraud.

**Table 11: Cash register machine reduces tax evasion or fraud**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid agree	2	33.3	33.3	33.3
strongly agree	4	66.7	66.7	100.0
Total	6	100.0	100.0	

As we can see the above table out of 6 respondents 4 or 66.7% of them strongly agree and 2 or 33.3% of them agree that the cash register machine reduces tax evasion or fraud.

So we can conclude that all experts believe that ETRs has an important role to decrease tax evasion with different agreement level.

The experts also asked to respond whether tax officials have possibilities to contact tax evader or not after ETRs implementation.

**Table 12: tax officials have no possibilities to contact tax evader after ETRs implementation**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid strongly agree	1	16.7	16.7	16.7
Agree	4	66.7	66.7	83.3
Neutral	1	16.7	16.7	100.0
Total	6	100.0	100.0	

Out of the total respondents 4 or 66.7% of them believe and 1 or 16.7% of them that tax officials have no possibilities to contact tax evaders after ETRs implementation.

#### **4.2.5 VAT Returns and Consumers of VAT registered Organizations**

The consumers of VAT registered organizations were asked different questions to measure their awareness about ETRs and VAT because the researcher believes that they

can play an important role to reduce VAT evasion if they do have enough awareness about it. The role of the customer is for instance, when the VAT registered organizations provide illegal receipts to their customer if the consumer are aware about cash register machine and VAT they will checking the legal background of the receipts so, they claim the business to get legal receipts and they can reduce tax evasions extent. The respondents were asked to indicate their knowledge about VAT and cash register machine and the sources of knowledge where they got an information if they aware about these issues.

**Table 13: Do you have enough knowledge regarding about VAT?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	2	4.4	4.4	4.4
very low	15	33.3	33.3	37.8
satisfactory	16	35.6	35.6	73.3
Good	4	8.9	8.9	82.2
very good	8	17.8	17.8	100.0
Total	45	100.0	100.0	

As we can see the above table from 50 respondents of a consumers of VAT registered organizations 2 of them or 4.4% doesn't have knowledge about VAT,15 of total respondents or 33.3% have very little knowledge and only 8 respondents or 17.8% are



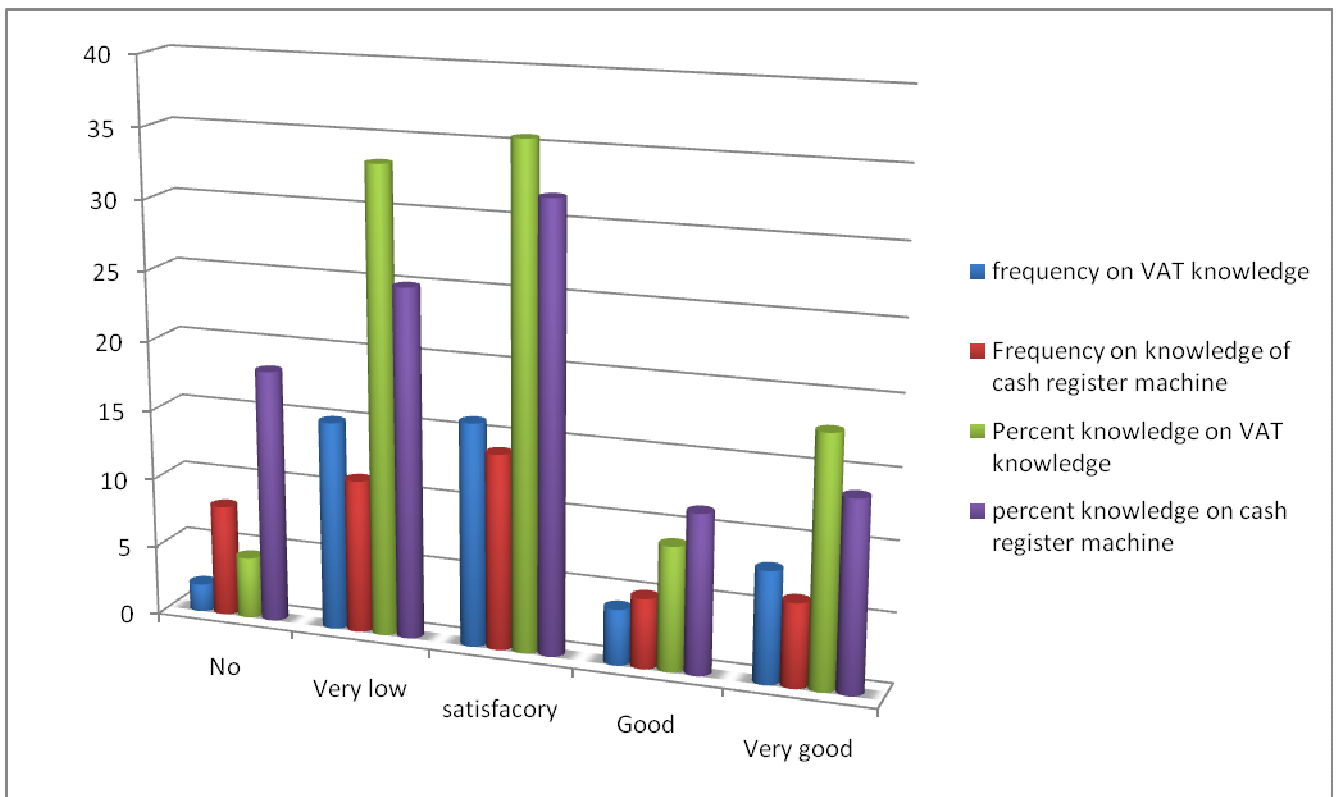
who do have very good knowledge about VAT. So, we can say that almost 40% of respondents have poor knowledge about VAT.

**Table 14: Do you have enough knowledge regarding about cash register machine?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8	17.8	18.2	18.2
	very low	11	24.4	25.0	43.2
	satisfactory	14	31.1	31.8	75.0
	good	5	11.1	11.4	86.4
	very good	6	13.3	13.6	100.0
	Total	44	97.8	100.0	
Missing	System	1	2.2		
Total		45	100.0		

According to the above table, we can see that the knowledge status of the ultimate tax payers of VAT about cash register machine which is using as a tool to collect VAT. When knowledge of the people increases about of cash register machine and VAT they can indirectly participating on controlling the VAT registered organizations whether organizations are using legal receipts or not. So, tax evasion can somehow reduces since consumers control them in addition to the tax authority. The respondents were asked

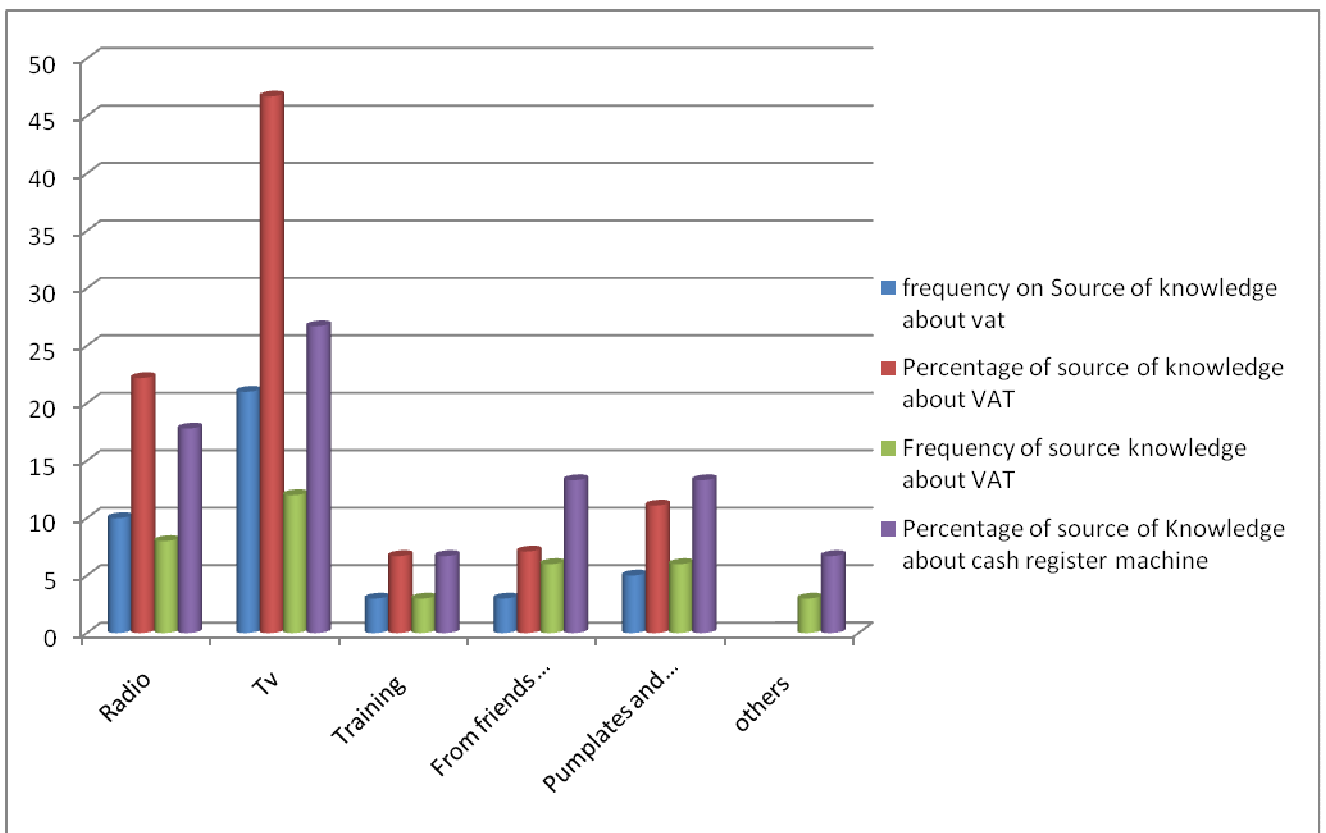
their knowledge status about cash register machine and out of 50 respondents 8 of them or 17.8% do not have information about cash register machine at all, 11 of them or 24.4% do have very poor knowledge, 14 respondents or 31.1% have satisfactory knowledge, 5 respondents or 11.1% do have good knowledge and 6 respondents 13.3% do have very good knowledge.



**Graph 3: Awareness source for VAT and ETRs**

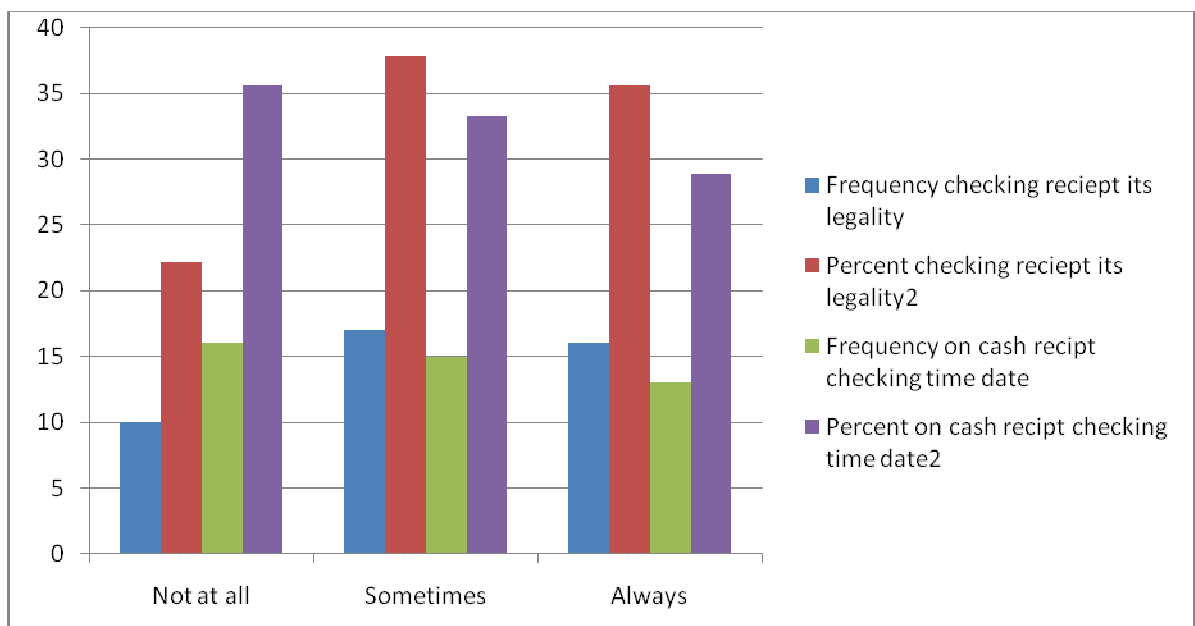
The following graph summarizes the source of knowledge for consumer of VAT registered organizations about cash register machine and VAT. Out of total respondents 10 and 8 got information from radio about VAT and cash register machine respectively, 21 and 12 persons got knowledge from television programs about VAT and cash register

machine respectively, 3 and 3 of them from training about VAT and cash register machine respectively, 3 and 6 from friends and relatives about VAT and cash register machine respectively, 5 and 6 from pamphlets and news paper about VAT and cash register machine respectively and 3 of them got information from others sources about cash register machine. This indicates that ERCA is not creating awareness about these important issues with training and pamphlets and news papers, whereas most of people is getting knowledge about cash register machine and VAT through radio and television programs.



**Graph 4: Source of information and knowledge about VAT and Cash register machine**

In addition to that ,the ultimate tax payer were asked about whether they are checking the legality of the receipt including time and date that provided by organizations while using services or buying goods. Because, this information is very crucial to measure the knowledge extent and their actions with regard to cash receipts. So, the following graphs shows that the respondents actions on cash receipts.



**Graph 5: Actions taking by the ultimate tax payer while they are using services or buying goods**

Out of the total respondents 35.6% percent does not checking the cash receipts legality and % date and time of the receipts, 37.8% percent of the respondents are checking

sometimes the legality and 33.3% date and time of the receipts and only 22.2% percent of respondents are always checking the legal background and 35.6% percent are always checking date and time of the receipts. That means most people is not taking the right action on the cash receipts regularly and participating in maintaining the tax laws and orders.

## **Chapter Five**

### **Conclusions and Recommendations**

#### **5.1 Conclusions**

Ethiopia has witnessed significant changes in many aspects of its economy over the last 10 years, but like most developing countries, it has had to contend with the common problems which affect the tax systems of developing countries .ETRs have been introduced to alleviate the tax systems problems of the country.

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

- Firstly, implementation of ETRs have a cause to happens a tremendous change on the VAT income. The findings of the research indicate that ERCA VAT income significantly increases after implementation of ETRs in order to collect VAT. So, the cash register machine has a positive impact on VAT income of the country.
- Secondly, the compliance cost of the VAT registered organizations decreases after they started to collect VAT by using a cash register machine. The ETRs helps the business organizations not only by reducing the cost in terms of money it also helps them for the timely filling of the monthly VAT returns is attributed to many factors. ETR is one of the factors. Most businesses indicated that timely filling of VAT returns was attributed to the adoption of the ETR machine. The business organizations also are enjoying additional benefits of ETRS. 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. Even though ETR helps the VAT registered organizations it is not friendly usable when the cashier made a mistake while collecting cash, it takes time for a correction of mistakes, the tax laws threatened the business if they made any mistake unintentionally it might consider as tax evasion, when the business serve money customers at a time it make late and most customers are blaming for their service qualities.

- Thirdly, on the Effectiveness of ETRs in processing of VAT returns; Electronic tax Registers reduce the operating cost of the government that were incurred to collect VAT and also business income. ETRs while improving the efficiency and effectiveness of government operations, provides timely and accurate tax information to businesses and increases the availability of electronic tax filing. It was found that ETRs have enhanced the revenue collection resulting from sound sales and stock audits.
- Fourthly, ETRs while increasing the VAT income it also reduces the tax evasion loophole. To evaluate the effect of awareness of ETRs and VAT in VAT income in fulfilling this objective, it was found that the ERCA does not create enough awareness to the people and the VAT registered organizations. The result shows that awareness and VAT income have direct relationship ,that means when awareness increases VAT income also increases .Audit follow up which take placed by the government in controlling the cash register machine user is not enough. Moreover, audit follow up affect VAT income positively, while audit follow up increases VAT income also increases.

- To sum up the above idea the introduction of ETR has assisted in cutting costs that the business and government used to incur in processing VAT; ETRs helped to decrease tax evasions, and lastly the introduction of ETR need to create enough awareness and strong regular audit follow up to get those fruit full benefit of ETRs.

## **5.2 Recommendations**

According to the study results the researcher finding some problems of the ETRs that need to be addressed by ERCA: since awareness of the people is very important to eliminate the tax evasion and can enhance the efficiency of the authority but ERCA doesn't work with regard to creating enough awareness through different mechanisms. This can be achievable if ERCA give training to Layman people while they are at school in the form of course. And ERCA can also create awareness by news papers, pamphlets, with attractive radio and television programs. In addition to that strong audit follow up is very important element to enhance VAT income and to reduce tax evasions. So, ERCA needed it audit follow up on a VAT registered organizations. ERCA is better to designed good and fast systems that can reduce the time of users of ETRs to make corrections for their errors without wasting time and additional cost.



### **5.3. Suggestion for Further Research**

This study is one of a few and it is new research area in Ethiopia since the country adopts this system before three years. So, areas of further research that were identified include a similar study to be carried out on others place and on other relative issue ,a study on cash register machine challenges and opportunities while business organizations encountered and how cash register machine is efficient to help the business and VAT returns. Crucially further research is should be done to determine how ETR contribution to a companies' financial performance can be measured and to what extent can the benefits if any be quantified by the organizations.

Furthermore, the research conducted on Addis Ababa City only. Hence, the scope needs to be widened to cover the rest of the country.

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**Addis Ababa University**  
**School of Business and Public Administration**  
**Department of Accounting and Finance**  
**VAT registered Organizations**

**Dear Respondents,**

The purpose of this questionnaire is to collect data for the thesis work in requirement for partial fulfillment of MSC degree in Accounting and Finance in Addis Ababa University. The study aimed at identifying the impact of cash register machine on VAT collection. I would like to emphasize that your response are extremely valuable for the successful completion of this paper and I would immensely appreciate your response for all questions genuinely. I can assure you that the information you provide will be completely anonymous and will not be used for any other purpose it will use only for academic purpose.

I thank you very much in advance for your cooperation and for sacrificing your invaluable time. Put tick (✓) mark in the appropriate answer box.

*1. About your Company*

1.1. The activity in which your organization is engaged:

Service giving  Merchandising  Manufacturing

1.2. The legal form of your organization:

Sole proprietorship  Share company  Joint venture

Others, Specify \_\_\_\_\_

1.3. When did your organization registered to collect VAT?

Before five year  Four years ago  Three years ago  This year

1.4. 1.3. When did your organization Started to using cash register machine to collect VAT?

Before five year  Four years ago  Three years ago  This year

***2. About Taxation and the related issues in Ethiopia (your responses take in to account and represents your organization)***

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

(Key: 1=strongly disagree 2= disagree 3= undecided 4= agree 5= strongly agree)

**2.1. Related to tax law enforcement**

Questions/statements	1	2	3	4	5
<b>2.1.1</b> Do you have enough knowledge regarding vat?					
2.1.2 do you think ERCA have been offered adequate training about vat?					
<b>2.1.3</b> Do you think ERCA offered you adequate training on usage of cash register machine?					
<b>2.1.4</b> ERCA create awareness about cash register machine via TV ,radio, pamphlets, news paper, others media.					
<b>2.1.5.</b> Do you think your organization incurring additional costs after you registered to collect VAT?					
<b>2.1.6.</b> Do you think your organization incurring additional costs after you started to use cash register machine?					
<b>2.1.7</b> The existence of vat unregistered org is creating unfair competition					
2.1.8 Using cash register machine facilitates the vat collection process and your work					

2.1.9. There is lack of clarity and transparency in imposing the penalty					
2.1.10. Does your vat payment increases after your organization using cash register machine?					

2.1.11. How much time take to prepare VAT returns while using cash register machine?

1. less than two days  2. Less than three days  3. More than three days
4. Less than five days  5. More than five days

2.1.12. Does the  greater than before using cash register machine to prepare VAT returns?

1. Very Costy  2. Somehow Costy  3. Costy
4. Low Costy  5. Very low Costy

2.1.13. What is your perception in ERCA audit follow up?

1. Not good  2. Good  3. Very good

2.1.14. Have you ever audited by ERCA after you started using cash register machine? If yes how many time?

1. Not at all  2. Less than three times in a year
3. More than three times in a year  4. Less than five times in a year
5. More than five times in a year.

2.1.15. How much you pay VAT annually before using a cash register machine? You can write your VAT payment for starting from your Company VAT registration year up to using a cash register machine.

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2.1.16. How much you pay VAT after you start using a cash register machine? You can write your VAT payment from using a cash register machine up to now.

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**Addis Ababa University**  
**School of Business and Public Administration**  
**Department of Accounting and Finance**  
**VAT experts**

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I thank you very much in advance for your cooperation and for sacrificing your invaluable time. Put tick (✓) mark in the appropriate answer box

### Personal Data

1. personal information

Gender: Male  Female   
Age: 20 -30  31-40  41& above

2. Educational level

- Diploma
- First degree
- Second degree
- Above
- Other \_\_\_\_\_

0-4. Work experience:  Less than 5 years  5-10 years  10 years

***1: General about Tax Evasion***

1.1. Do you believe that tax evasion by VAT registered organizations is significant?

Yes  No  I don't know

1.2. If your response is 'yes', which tax do you believe is evaded more? (Multiple answers are possible)

Business profit tax

VAT

Payroll tax

Other  , specify\_\_\_\_\_

1.3. If your Response to the question number 1.2. is 'yes'; what do you think are the reasons and what do you think are the remedies for the problem?

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**2. about cash register machine, VAT and other tax issues related**

For the following questions please tick(✓) the choice of your response which shows the level of your agreement or disagreement to the given statement.

[key: 1=strongly disagree 2= disagree 3= neutral 4= agree 5= strongly agree]

Questions/statements	1	2	3	4	5
2.1.1. The use of cash register machine reduce tax evasion or fraud.					

2.1.2. Ethiopia Revenue and Customs Authority (ERCA) offered adequate training about VAT.					
2.1.3. Awareness creation program organized currently by ERCA is not extensive and not sufficient to build tax morale and improve tax compliance by VAT registered organizations.					
2.1.4. Do you think adequate awareness creation training has been given to the VAT registered organization regarding the use of cash register machine					
2.1.5. The education and awareness creation program through television, brochures, magazines, news papers and others is not sufficient to improve compliance.					
2.1.6. Using cash register machine facilitates the VAT collection process.					
2.1.7. Using cash register machine to collect VAT can reduce administration cost.					
2.1.8. The use of cash register machine has indispensable importance for efficient VAT administration					
2.1.9. VAT registered organizations VAT payment increases after they started uses cash register machine.					
2.1.10. Using cash register machine for VAT collection has indispensable importance for effectiveness of VAT administration.					
2.1.11. Do you think that using cash register machine for VAT collection has indispensable importance for reduction of corruption					
2.1.12. The tax payers does not have good perception of ERCA tax audit follow up system					
2.1.13. The criteria for selection of tax payers for audit and auditing procedures lack clarity and transparency.					
2.1.14. The existing audit selection criteria are not sound enough to identify tax payers that engaged in tax evasion.					
2.1.15. Tax officials have no possibilities to cooperate [contact] with					

tax payers (cash register machine users) who intend to evade tax and engage in bribery activities.					
2.1.16. The chance of being detected is relatively low if an official is engaged in corrupt activities on cash register machine users.					
2.1.17. The training provided to VAT registered organization by ERCA on tax laws, tax benefits and tax return filings is not sufficient to minimize tax evasion.					
2.1.18. The tax evasion by most VAT registered organization arise from lack of knowledge on tax issues like penalties, tax codes and tax regulations.					
2.1.19. The penalty (on tax officials) for engagement in corruption if detected is not that much strict when compared with the benefits if undetected					
2.1.20. The existing level and extent of penalties for evaders and tax personnel who are working in collusion with tax evaders are not sufficient to discourage VAT evasion/frauds					
2.1.21. The existing practice of penal actions is too weak to discourage tax payers from evading VAT.					
2.1.22. There is lack of consistency and transparency in imposing penalties.					

**3. Please write short and precise answers for the following questions.**

3.1. Please specify the drawbacks in ERCA that open the door for corruption by tax officers related with VAT . \_\_\_\_\_ -

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3.2. What suggestion do you have on measures that should be taken to mitigate problems related to tax education or public awareness program so that tax evasion is minimized?

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3.3. If you think the existing **enforcement of penal actions** are too weak, What do you think are the reasons? \_\_\_\_\_

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*Great thanks for your cooperation!!!*

**Addis Ababa University**  
**School of Business and Public Administration**  
**Department of Accounting and Finance**  
**Consumers of VAT registered Organizations**

**Dear Respondents,**

The purpose of this questionnaire is to collect data for the thesis work in requirement for partial fulfillment of MSC degree in Accounting and Finance in Addis Ababa University. The study aimed at identifying the impact of cash register machine on VAT collection. I would like to emphasize that your response are extremely valuable for the successful completion of this paper and I would immensely appreciate your response for all questions genuinely. I can assure you that the information you provide will be completely anonymous and will not be used for any other purpose it will use only for academic purpose.

I thank you very much in advance for your cooperation and for sacrificing your invaluable time. Put tick (✓) mark in the appropriate answer box.

1. Do you have enough knowledge regarding about VAT?

1. No       2. Very low       3. Satisfactory   
4. Good       5. Very good

2. If you have some knowledge about VAT, where do you get the information ?

1. Radio       2. TV       3. Training       4. Friends or relatives   
5. Pamphlets       6. Others ,  Specify

3. Do you have enough knowledge regarding about cash register machine?

1. No       2. Very low       3. Satisfactory   
4. Good       5. Very good

4. If you have some knowledge about a cash register machine, where the source of your knowledge?

1. Radio       2. TV       3. Training       4. Friends or relatives   
5. Pamphlets       6. Others ,  Specify .....

**5. Do you check the receipt whether it is legal or not which provided by vat registered organization to ask you payment?**

1. Not at all  2. Sometimes  3. Always

6. If you are checking cash receipt its legal ground ,where do you get this information?

1. Radio  2. TV  3. Training  4. Friends or relatives

5. Pamphlets  6. Others ,  Specify .....

7. Does you check cash receipt time and date while you are asking to make payment?

1. Not at all  2. Sometimes  3. Always

8. If you are checking cash receipts its legal ground ,including time and date where do you get this information?

1. Radio  2. TV  3. Training  4. Friends or relatives

5. Pamphlets  6. Others ,  Specify .....

9. Do you take the receipt after you pay?

1. Not at all  2. Sometimes  3. Always

10. If you are taking cash receipts after you pay, where do you get this information?

1. Radio  2. TV  3. Training  4. Friends or relatives

5. Pamphlets  6. Others ,  Specify .....

11. Have you ever face receipts that have no right time and date?

1. Yes  2. No

12. Does you reduces your consumption because there is VAT?

1. Yes  2. No

13. Does you prefer non VAT registered organizations than registered organizations to buy goods or consumes services?

1. Not at all  2. Sometimes  3. Always