Challenging Factors to Collect Value Added Tax and Turn Over Tax using Cash Registered Machines: A Study on Wolaita Sodo Town Administration

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ABSTRACT

This study was conducted to assess the challenging factor to collect VAT and TOT using cash register machines in the case of Wolaita Sodo Town administration. To achieve the objectives of the study, both primary and secondary sources of data were used. Using stratified random sampling methods, 210 Value added tax payers, 57 Turn over Tax payers and 18 tax experts were selected from a total functional population of 1145 with a 97% return rate of questionnaires which means that 285 respondents were returned questioners and the remaining 3% respondents were not returned questioners. The collected data through questionnaires were summarized and analyzed using both descriptive statistics and inferential statistics. The findings of this research were that VAT and TOT collection using the cash register machine has a positive effect on VAT and TOT revenue and other independent variables (knowledge and skills, audit follow up, operational cost, and tax evasion) have a significant effect on VA. The town tax administration requires audit follow up on VAT and TOT tax payers registered organizations (business owners). The town administration tax office is required to design good and fast systems that can reduce the operation and maintenance cost of the users of the machine to make corrections for their errors without wasting time and additional cost.

Keywords: *Cash register machine; Value added tax; Turn over tax; Knowledge; Tax evasion; Audit follow up and Costs.*

1.0 Introduction

One of the mechanisms by which countries raise revenue to finance government spending on the goods and service is by using taxation as their tool.

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As compared to the developing countries, the developed countries have been able to generate substantial revenue through the imposition 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 Simon (2013).

Governments in low-income countries have the difficult task of making wide-ranging decisions about public spending, taxation, and borrowing with the aim of helping their countries maintain long-term debt sustainability, achieve higher economic growth, and ultimately reduce poverty. One of the challenging factors of implementing policies is raising public revenues which is difficult in the context of macroeconomic and growth instability, high debt ratios, weak tax administration, and large informal sectors. In 2018, Ethiopia collected ETB 198 billion tax revenue, which undermined by ETB 43.5 billion compared to plan. Total internal tax revenue collection was ETB 120.3 billion in the year, which shares 60.76% of total tax revenue in the country MORE (2018).

The tax system needs to be economically efficient, meaning the tax system should not have an impact on the allocation of resources. The tax system countries should adopt easy and not expensive to administer systems that should be able to respond to the 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 (2003). It follows that optimality in a tax system requires the absence of distortion in any economic activity Hancock (1995).

According to Kerever study (2008), the special characteristics of African VAT and ToT are the degree to which the implementation exposes the need for broader institutional transformation and modernization of revenue administrations. So, because of modernization, value added tax collection would face some challenges and opportunities that can face African countries as per kerver finding. Currently, Ethiopia is administrating its revenue and tax collection by using technology. The Ethiopia government issued regulation No. 139/2007. These regulations are issued by the council of minister pursuant to Article 5 of the definition of powers and duties of the executive organs of the federal Democratic Republic of Ethiopia proclamation No. 471/2003, Article 64 of the value added tax proclamation No. 285/2002 and Article 117 of the Income tax proclamation No. 286/2002, part two, obligatory use of sales

Register Machine that are accredited in accordance with the provision of these regulation to generate sales receipts as provided for in Article 4. In 2009 G.C, the Ethiopian Revenues and Customs Authority adopted the digital cash register machine for 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.

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 service activities, return process and debt and audit activities; publicity campaign and taxpayer training. These measures are expected to improve the government's revenue position (As Herouy cited, from Africa Development Bank, 2003). In 2009, the Ethiopian government knew that using the cash registration machine (CRM) for collection of taxes can enhance the government's revenue position as well as reduce the degree of tax evasion.

Therefore, this paper deals with the problems and opportunities of CRMs on VAT and ToT income in Wolaita Sodo town. Even though, there are many researches conducted by different researchers, they don't discuss about the challenges of technology on VAT and ToT income in Ethiopia. Therefore, the main objective of the study is to assess the challenging factors to collect value added tax and Turnover tax by using a cash register machine in case of Wolaita Sodo Town Administration.

2.0 Literature Review

2.1 Definition of VAT

VAT is, thus, inherently a sales tax with its unique features that makes it distinct from other forms of sales tax. There exists confusion to identify VAT from other sales taxes in its introduction for the first time. VAT appears to be imposed on business entities as it belongs to the sales tax family. In reality, however, business entities are simply agents to collect taxes from individuals, who bear the final burden, final consumers.

VAT is a tax on the added value on a good or service. The value added is imposed on the value that the business entity adds to the goods and services that it

buys from suppliers or other firms. This value is added partly owing to the fact that processing or handling purchased materials/items requires additional labor or capital that shall be calculated out from the final product/service and partly because buildings machinery, etc. are devoted to preserve the good or provide the service to its destination. Costs of production and preservation shall be borne/deducted from the proceeds of the sale of the good /service (value added) which is serving as tax bases for VAT. 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 design of VAT also includes concessions to small scale business to register to collect VAT. However, an equalization of tax scheme is being worked out to ensure equity considerations for all levels of the taxpayers when a business that is registered for VAT supplies (or sales), goods or services: VAT is included on the selling price (but shown separately) and collected by the business. The VAT on these supplies is called an output tax. When a business that is registered for tax purchases, goods or services the VAT paid on these supplies received is called input tax Wondwossen (2016).

2.2 Definition of Turn over Tax

Turn over tax is applicable on supply of goods, rendition of services and persons not registered for VAT. Accordingly, there is its own mode of assessment and impositions of obligations expected to be discharged on persons subject to the same. With the definition of terms under turnover tax, unless otherwise defined in the proclamation, the meanings defined in Value Added Tax Proclamation No. 285/2002 shall be used Art 2(1).

i. **Supply of goods**: In trying to define the supply of goods under turn over tax proc, since it is not clearly touched, as per Art 2(17) of the VAT proc it is to mean the sale of goods and or services or both. “Goods” is defined under Art 2(7) of proc 308(2002) is to mean any kind of goods or commodity that has exchange value, utility and brings about satisfaction and includes animals. From this wording, we can say that the scope of application turns over tax law is on sale of goods and animals also002E

ii. **Rendition of services:** Services rendered to persons not registered for VAT are under the scope of turn over tax proclamation. Regarding the definition for the term service since the turn over proc fails to deal with it as per Art 2(1) of proc 308/2002 cum Art 2(7) of proc 285(2002) it is to mean “work done for others which does not result in the transfer of goods.”

iii. **Persons not registered for VAT**: The other term that needs explanation at this juncture is "persons not registered for VAT." According to Art 2(4) of proc 308/2002" a person not registered" is a person who is not registered for VAT by reason of his annual turnover being bellow 500,000 or threshold set by the minister, by reason of not having applied for voluntary registration.

But, we also have to notice that turnover tax is not applicable to every import of goods and an import of services as provided under Art 23 of the VAT proclamation (they are subject to VAT).

Though turn over tax is applicable to supply of goods, rendition of services and to persons not registered for VAT, not all transactions are taxable. The proclamation recognizes certain exemptions: In this respect, as per Art 7, the following are exempt from turn over tax: the sale or transfer of a dwelling house used for a minimum of two years or the lease of a dwelling; the rendition of financial services; the supply of national or foreign currency and securities except for that used for numismatic purposes; the rendering by religious organizations of religious or other related services; the supply of prescription drugs specified in directives issued by the relevant government agency; and rendering of medical services; the rendition of educational services provided by educational institutions as well as child care services for child can at pre- school institutions; supply of goods and rendering of services in the form of humanitarian aid the supply of electricity, kerosene and water, license fees, etc. In addition, attention shall be rendered so as to infer that these are not the only listings of exemptions, ministry of finance and economic development by virtue of Art 7(2) of turnover tax proclamation may provide others by its directives.

2.3 Challenging factors to collect Taxes in Ethiopia

2.3.1 Tax Evasion

Tax evasion, in general, refers to illegal practices to escape from tax liability. In case of tax evasion, taxable income; profits liable to tax or other taxable activities, i.e., the amount and/or the source of income, are misrepresented, or tax reducing factors such as deductions, exemptions or credits are deliberately overstated. Tax evasion can occur in two major ways: First, in legally registered activities when businesses or individuals completely fail to report their income, understate their income, overstate their deductions/expenses or delay in paying their tax returns; and second, in the informal/underground economy where the whole activity takes place in an informal manner in which businesses are not only evading tax payments but also not fulfilling the legal requirement necessary for their operation Ketema (2013).

According to an IMF 2017 study on electrical fiscal device or cash register machine, the impact of taxpayer and compliance and administrative efficiency, that tax evasion and fraud is illegal and intentional misrepresentation of tax obligations. It can involve deliberate omission or falsification of income or revenue, as well as efforts to be invisible to tax authorities altogether. This results in the reduction of income that lawfully belongs to the government, and to the people. The following are the important causes for tax evasion:

i. **High rates of taxation:** Prevalence of high rates is the first and foremost reason for tax evasion. This is because (A) the higher rates of taxation create a psychological barrier to greater effort and undermine the capacity and will to save and invest; and (B)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 Palil (2010).
ii. **Complexity of tax laws:** Complicated tax laws are another factor for tax evasion. Complex tax procedures involve lot of time, cost seeking the assistance of tax experts and their advice by taxpayers. Such complication in tax laws may lead the taxpayers for evasion.
iii. **Sharing of experienced personnel:** As sited in OECD (2013), shortage of experienced personnel is yet another cause of tax evasion. Tax Authorities should have a sufficient number of trained and experienced personnel to cope with assessment and investigation.

2.3.3 Knowledge about the importance of paying tax

Most taxpayers perceive taxation as a compulsory extraction of their property by the tax authority. Knowledge is related to the taxpayers' ability to understand taxation laws, and their willingness to comply. Attitude towards tax compliance can be improved through the enhancement of taxation knowledge. "When a taxpayer has a positive attitude towards tax, this will reduce his or her inclination to avoid tax payment." Taxation knowledge is necessary to increase public awareness especially in areas concerning taxation laws, the role of tax in national development. Regardless of this fact, taxpayers, especially in developing countries, do not have enough knowledge about the importance of paying tax for the development of their county in general and the fulfillment of public infrastructures and basic facilities that are necessary for the peaceful running of their business and life in particular. Such a wrong perception of taxation encourages taxpayers to avoid their tax liability by employing different methods. The issue of tax payers' tax knowledge is critical in the self-assessment system. Tax payer's tax knowledge and awareness are imperative for the tax authority

to better the tax system and for voluntary compliance. Previous studies such as Palil (2010) recommended tax knowledge and awareness as the significant factors that influence taxpayers' voluntary compliance attitude. Besides, the tax payer's positive perception towards the tax system and tax authorities, enhances the voluntary compliance behavior of tax payers' work.

2.3.2 Tax audit

An activity or a set of activities performed by Tax auditors to determine a taxpayer's correct tax liabilities for a particular accounting or tax period, by examining a taxpayer's organization procedures and financial records in order to assess compliance with tax laws and verifying the true, fair, reliable, and accuracy of tax returns, and financial statements.

Conducting an audit, various types of information will be reviewed, namely, tax returns, financial statements, accounting records, customs declaration and other source documents. Generally, an audit will examine different issues identified as most significant in achieving an accurate assessment of a taxpayer's tax liability. Some of the typical issues will include any indications of unreported income, or potentially over claimed deductions, over /under valuation, smuggling and illegal activities.

Tax audits usually focus on areas where there is a high risk with regard to the amount of tax paid and/or payable. Depending on the specific factors relating to a taxpayer, the scope of tax auditing will often vary. However, it is important to remember that the primary objective of an audit is to determine the correct amount of tax that ought to be paid. The above stated objective is very important to tax payers as well as to tax authorities and it helps ensure that taxpayers have confidence in the fairness of the audit process such that an audit could result in either an increase or a decrease of a taxpayer's tax liability (ERCA).

Tax audits, frequency of audit and prior audit experience have been ambiguously discussed in relation to tax compliance. Some studies found out that audits have a positive relationship with tax evasion (Tadesse and Goitom, 2014). These findings recommended that tax audits can play an important role in tax compliance. The frequency of audits and the carefulness of tax audits could encourage taxpayers to become more careful computing and submitting their tax returns. Conversely, taxpayers who have never been audited might be trying understating their income and over stating their deductions Palil (2010). A study by Beron, Tauchen and Witte, (1988) and Tilahun and Yidersal (2014) argue that audits did not significantly relate with tax compliance. Hence, it shows that previous studies have found controversial results about the association between tax audit and tax compliance.

2.3.4 Operation cost

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 *et al.*, (1989). 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 *et el.*, (1989).

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 *et al.*, (1989) 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…"

2.3.5 Administrative costs

Allers (1994) 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 costing 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.

2.3.6 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 *et al.,* 1989). 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, compliance costs 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.

2.4 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 a 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.

2.4.1 The History of cash registers

James Ritty invented the cash register, "in prevent 1879 stiffing in his shop from skimming cash from any sale." Key features of this register included a display to indicate the amount of the sale, sales, and a total bell adder that summed "ring all the

cash up" values of the key presses during a day. In 1884, the basic design was improved with the addition of a paper roll to record sales transactions, thereby creating the receipt. In 1906, the addition of an electric motor resulted in the first electric cash register. Today, many cash registers are essentially computers. Often cash registers are attached to weighing scales, barcode scanners, and debit card or credit card terminals. These types of cash register are functioning as point-of-sale terminals IMF (2015).

The term "Electronic Fiscal Device "can be used to describe a wide variety of technological devices that revenue administrations can use to help monitor business transactions. These devices run the gamut from electronic intelligent seals customs uses to monitor container traffic to fiscal control devices used to control excise tax control through the automatic monitoring of production and delivery of excisable goods. The term EFDs will refer to devices normally used by tax administrations to monitor business-to-consumer and business-to-business transactions that create a fiscal obligation for consumption taxes usually for the sales tax or the value-added tax (VAT).

A key element of these devices is the presence-proof of memory, a "fiscal usually certified by a relevant government authority." The most commonly used EFDs are Electronic Cash Registers (ECRs) and EFPs. The technology enabling the deployment of the first generation of ECRs became available commercially at reasonable prices in the late 1970s, and ECRs started to be used by large retailers in developed countries around that time. It is generally accepted that the first to use EFDs in support of its fiscal control strategy was the Italian administration, which adopted fiscal devices in 1983 (OECD 2013).

The Greek tax agency appears to be the next administration to adopt fiscal devices, implementing them in 1988, and extending their scope to include electronic signature devices (ESDs) in addition to the fiscal registers adopted in Italy. An IMF study, (2015) on electrical fiscal device or cash register machine impact of taxpayer and compliance and administrative efficiency, unlike their Kenyan counterparts, Ethiopian businesses received no subsidy for the purchase of fiscal devices. It also appears that the Ethiopian Customs and Revenue Authority (ERCA) did not fully engage with the Ethiopian businesses or their representative associations in the initial design stages, resulting in some challenges in the adopted technology, particularly the universal requirement of English as the main language in the devices. As in the case of Kenya, there was a scarcity of devices in the initial stages of implementation, and those that were available were expensive.

The Ethiopian business associations were more explicit in their views of the negative impact of the introduction of EFDs, especially on small and medium

businesses, and were of the view that a number of small businesses in some specific industries suffered a very negative financial impact. It is not clear whether this was a consequence of other legislative changes that occurred at the same time, or if it was a direct impact of the introduction of EFDs.

The associations also noted that ECRA could have done more to automate the reporting processes and help businesses reduce the overall compliance burden imposed through manual reporting. In summary, the assessment of the private sector representatives was that there has been a noticeable increase in the compliance burden through the additional costs (which were very high for small business) and the increased reporting frequency for all businesses, in addition to the manual monthly reports that are still required.

2.4.2 Opportunity of cash register machine

A) Accuracy

Among the major benefits of electronic cash registers is their high degree of accuracy. The internal computer system records each transaction, making it easy for managers to compare sales figures with the money in the drawer at the end of the day and isolate the source of discrepancies. Electronic cash registers also provide an advantage to sales staff who use the system to know exactly how much to charge customers and how much change to return after payment. Electronic registers include features for applying discounts and promotions as well as tools for voiding transactions, all of which help the user provide fast, accurate customer service Birtukan (2012).

B) Security

Electronic cash registers offer a degree of security for retailers. They are often large enough to prevent easy theft and feature locking mechanisms for cash drawers, as well as password- protected access that only allows authorized users to log in and use a register. Older mechanical registers have no such mechanism with the exception of a key lock for the cash. Electronic registers also process cash transactions locally, which mean there's no need to transmit private customer data electronically or over the Internet as there is with web-based payment methods Ben (2012).

C) Inconvenience

Though easier to use than manual cash registers, electronic registers represent

a more inconvenient option than more modern payment options. A shop can only serve as many customers at the same time as it has registers available. Newer point of sale technologies allows employees to accept payments throughout a store, not just in a checkout area. This technology uses hand-held devices, including smart phones and tablet computers with miniature credit card readers and remote printers to process payments and provide receipts. As a result, customers may find shorter lines to pay for their purchases Ben (2012).

Retail employees require adequate training prior to taking over register duties, even with the help of an electronic cash register. Those familiar with registers from another store may still require training to become familiar with a new type of register. Smart phone- and web-based payment systems have increased automation and are easy to learn for employees already familiar with the devices. This reduces the time and money a retailer needs to spend training employees to operate registers. It also allows managers to distribute work more efficiently, since there's no need to place one employee in the checkout area if associates throughout the retail space are all capable of processing transactions for customers Ben (2012).

2.5 Empirical review

Taye (2011) assessed the impact of Electronic Tax Register on Value Added Tax, the case of Addis Ababa City Ethiopia. The study sought to determine the effect of the Electronic Tax register on administration cost and compliance cost, the extent of tax evasion while using ETRs and audit follow up effects. The study established if the ETRs had increased the speed at which taxpayers processed their VAT returns and if there were any associated costs in the processing of VAT. The population under the study encompasses of 3000 VAT 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). The data analysis was done using multiple regression and descriptive statistics. The findings of this research show that ETRs have a positive effect on VAT returns and other independent variables have a significant effect on VAT income except compliance cost.

According to Nyasha *et al*. (2012) in their study dealing with attitudes of employees towards the use of fiscal electronic devices in calculating value added tax (VAT), this was a case study of motor industry in Zimbabwe, the research sought to find the attitude of motor industry employees in Zimbabwe towards the use of fiscal electronic device. The findings of the study revealed that fiscal electronic devices had positively impacted on the motor industry through improvements in tax collection;

saves time in tax collection, reduces direct contact between tax collectors and hence minimizes corruption. Moreover, the study found out that employees with low educational level find it difficult to use fiscal electronic devices because they lack know how on how best to use them. Employees also negatively perceived the use of fiscal electronic devices because they are not aware of the method and some are just resistant to change that is given and will reject using the advanced method.

Pandu (2012) studied the effects of using EFD on performance of VAT collection to VAT taxpayers in Dares salaam, Tanzania. This study had the objective of establishing if the Electronic Fiscal Device had increased the speed at which taxpayers processed their VAT returns and if there were any associated costs in the process of VAT. Data were collected from registered VAT taxpayers in Dares Salaam and Tax Revenue Authority staff. The main instrument of collecting primary data was questionnaires while secondary data were obtained from the Tanzania Revenue Authority offices. This study concluded that Tax Revenue Authority should enhance the usage of EFD in order to combat tax evasion and increase VAT Collection. Pandu observed that timely filing of the monthly VAT returns is attributed to many factors and EFD is the one of the factors. Further the introduction of EFD has assisted in cutting costs that the business used to incur in processing VAT. When the researcher evaluates the effectiveness of EFDs in filling VAT returns, it was realized that the use of EFDs has assisted the business in many ways.

Salim (2014) studied the impact of electronic fiscal devices on value added tax collection process: the case of Tanzania revenue authority Tanga city. The study found that EFDs have a significant impact on VAT collections volume as the results showed that there is significant difference means to VAT collection from the two periods. This outcome was due to the proper use of EFDs by the traders, effective mechanisms of Tax Revue Authority in monitoring the implementation of EFDs and enforcement measures taken by TRA to those traders who convicted to made offences.

Zinash Degife Gela studied in (2014) the challenges of electronics tax register machine to businesses and its impact in improving tax revenue. This study was conducted to assess Problems faced by traders during using CRMs in the Case of Addis Ababa City. The paper has identified problems related to the use of ETRs from the perspective of taxpayers. The study has used both primary and secondary sources of data. Using random sampling method 363 taxpayers were selected from the total population of 6794 with 85% return rate. The major findings are: The use of ETRs improved timely filing of the monthly VAT returns. The major problems faced by the taxpayers are unallowable expenses due to the problem of ETRs suppliers and the lack

of consistency and transparency in imposing penalty for tax personnel. Maintenance cost and time, higher compliance costs are also found to be among the major problem of the tax payers. With the effectiveness of ETRs in tax collection, the use of ETRs has significantly improved the collection of value added tax and has increased government income. Problems associated with the use of CRMs, the study has identified the major problems faced by the traders: The supplier of ETRs do not maintain the machine within short time (48 hrs. since problem reported).

Empirical studies in Turn over Tax such as Utaumire, Mashiri and Mazhindu (2013) evaluate the effectiveness of the presumptive tax system. Utaumire *et al.* presents a case study of the Zimbabwean Revenue Authority (ZIMRA) Region One, in Zimbabwe. Based on a survey of 100 ZIMRA staff members, 180 informal traders and 20 local authority staff members, the main findings of the study were that many players in the informal sector are unaware of the existence and objective of the presumptive tax head (a tax that is the same for everyone and is not based on income). On the other hand, the absence of involvement of stakeholders concerned in determining tax rates has resulted in forceful resistance. ZIMRA has its own shortcomings, which include lack of follow ups and inadequate awareness campaigns. The study revealed that effective implementation and administration of the tax head has the potential to increase the revenue base. This means there is room for improvement on the implementation and administering of the presumptive tax.

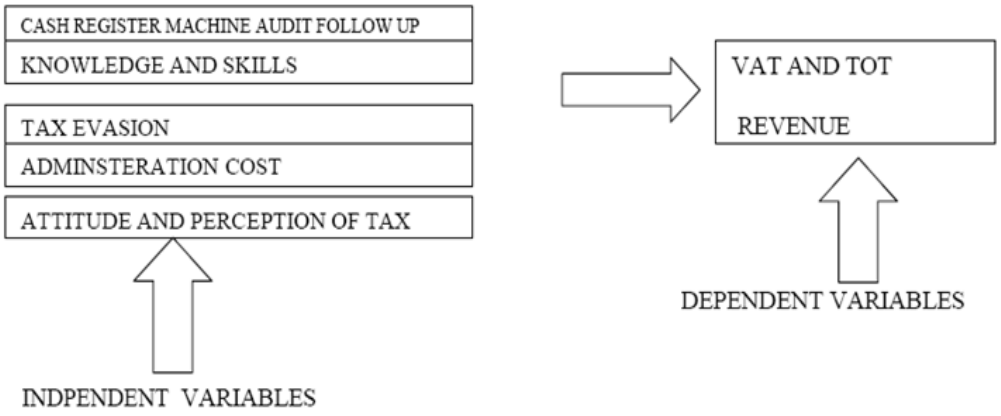
On the other hand, Eissa, Murray & Zeitlin (2017) examined the impact of the 2012 reform of micro and small enterprise tax law in Rwanda, which created a presumptive 'flat fee' regime in both personal and corporate income taxes. In this regime, taxpayers whose turnover fell within a given band, pay a fixed liability, with a zero marginal tax rate. In the years following, the number of registered taxpayers and the total taxes collected under corporate and personal income tax have increased, but these increases are not necessarily attributable to the 2012 reform. The findings also identified four channels which may have affected tax revenues, two intensive and two extensive. Intensive ones affect the revenues derived from existing taxpayers while extensive ones operate through the entry and exit of firms to and from the tax net. Impacts on intensive margins are negative, and can be estimated directly from taxpayer behavior. Impacts on extensive margins are positive, but cannot be point identified without strong assumptions. Taking these findings together, there is a reasonable policy case to reform rather than repeal the flat fee regime.

The researcher will see a different issue in this study, the issue explained by classifying and considering them as dependent and independent variables. The variables relationships are explained as follows. The dependent variable is VAT

revenue while the independent variables are knowledge of tax payers towards the use of machine and VAT registered organizations, tax evasion, tax audit and follow up, operation and administration cost. In this case the dependent variable affected by these independent variables, for example, VAT, income affected (increases or decreases) by Awareness of taxpayers, that means when the tax payers' attitude is good 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 the cash register machine, the value added tax income will also decrease or increase. When we see the relationships between VAT, income and tax audit follow up, there is a high relationship affecting the VAT revenue because of this variable. For instance, when the tax authority has a usual tax auditing the organization accounting information the extent of evasion may deduct because of fear so that the VAT income will increase because of reducing the evasion through tax audit.

2.5.1. Conceptual framework of the research

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



In general, it can be concluded that although there have been studies on VAT and TOT Administration and Indirect tax implementation and its problem in some developing countries, including Ethiopia, there are not enough studies that examine the challenging factors in collecting VAT and TOT revenue since it is a new technology

which is adopted by the Ethiopian Revenue and Customs Authority. Therefore, since it is a new system which is adopted by the tax authority, there is no clue about the exact figure of whether there are opportunities or problems of cash register machine in the VAT and TOT collection process. In this study, the objectives are to examine the impact of cash register machine of VAT and TOT collection and to identify the problems and opportunities of the machine in the process of VAT and TOT collection.

3.0 Research Methodology

3.1 Research design and approach

The study applied a mixed (both quantitative and qualitative) research approach to assess the challenging factors to collect value added tax (VAT) and turn over tax (TOT) using cash register machine in Wolaita Sodo Town Administration. The reason of using a mixed methods approach is to gather data that could not be obtained by adopting a single method Creswell (2003). The quantitative research approach was applied to identify major challenges and opportunities observed in implementing and administering cash registration machine (CRM) to collect VAT and TOT in case of Wolaita Sodo Town Administration.

3.2 Sources of data

The study used both primary data and secondary data. As part of primary data source, questionnaires were distributed to machine supplying organization staffs, from the value added tax registered organizations, turn over tax registered and from tax experts and administrators.

3.3 Data collection methods

Quantitative data were collected by using a questionnaire and qualitative data were collected by using unstructured questions and interviews. The questionnaire was designed as open ended and close ended types of questions. A questionnaire was used to collect data from tax payers concerning the opportunities, factors affecting VAT and TOT collection using the cash register machine while the interview was used to collect data from cash register machine suppliers.

3.4 Sampling design and sample size determinations

3.4.1 Target population

The total suppliers of cash register machine are 10 nationally, but in Wolaita Sodo Town Administration, the cash register machine supplying business entities staffs are 3; value added tax registered business entity owners or managers are 1,124 and tax

experts and administrators in Wolaita Sodo Town Administration are 18. The sum of population was 1,145 among them 296 was taken as a sample and those sampled population were selected from the entire target population (Wolaita Zone Revenue Authority, 2019).

3.4.2 Sample size determination

The mathematical formula used for determining the sample size, the researcher employed a simplified formula recommended by Taro Yamane (1970), assuming a 95 % confidence level

$$n = N / (1 + N(e)^2)$$

Where, n = Sample size, N = Desired population number, e = Level of precession that assume and e = 0.05

Out of 296 total sample size, 275 were selected from tax payers using stratified random sampling techniques by stratifying tax payers in to two strata (category A and category B), and the remaining 21 respondents were selected from tax experts (18) and cash register machine suppliers (3) using purposive sampling.

3.4.3 Sampling design

Since the researcher have three different populations, purposive sampling was used to select machine supplier staffs and tax experts while stratified sampling was used to select tax payers into two categories (category A tax payers and Category B tax payers).

Table 3.1: Sample size selection

Taxpayers	Total number	Sample size	Sampling method
Category A tax payers	882	216	Random
Category B tax payers	242	59	Random
Tax collectors, experts	18	18	Purposive
Cash register machine supplier experts	3	3	Purposive
Total	**1,145**	**296**	

3.5 Data presentation and analysis

The collected data through questionnaires was analyzed using both quantitative and qualitative data analysis methods. Qualitative data collected through unstructured questionnaire and interviews was analyzed by using narration and triangulation while quantitative data was analyzed by using descriptive statistics and inferential statistics.

4.0 Data presentation, Analysis and Discussion

4.1 Response rate

According to Learay (2004), the response rate is defined as the extent to which the final set of questionnaires collected from respondents is calculated against the number of questionnaires received back from respondents interviewed in the study. For this study, the sample size was 293 respondents, excluding cash register machine supplier staff, that is, 3. A total of 293 sets of questionnaires were distributed to the potential respondents and a total of 285 questionnaires were collected. 8 sets of the questionnaires were considered unusable (6 from VAT payers and 2 from TOT payers) because they were not properly filled in the study areas. Therefore, 285 usable sets of collected questionnaires were used for the data analysis. Thereby, the response rate was 97 %.

4.2 Nature of business entity

Concerning the nature of the Business entity, 51.9% of VAT payers where service providers, 38.6% were retailers and the remaining 9.5% were wholesalers. However, there were no wholesalers in the TOT payers due to the tax law which prohibits the wholesalers not to be TOT payers. Thus, 56.1% of TOT payers were retailers while 43.9% were service givers.

4.3 Experience in using cash register machine

46.7% of VAT payers had an experience of more than 5 years, 33.3% had 4 to 5 years of experience, 16.7% had 1 to 3 years of experience and 3.3% had below a year of experience. On the other hand, 66.7% TOT payers had 1 to 3 years of experience, 21.1% had 4 to 5 years of experience, 8.8% had more than 5 years of experience and 3.5% had less than a year experience.

4.4 Descriptive statistics VAT collection

The average annual VAT revenue actually collected by using a cash register machine was 44302951.19 Birr with a standard deviation of 32911901.51 Birr from potential of average 55614727.80 Birr with a standard deviation of 47510697.89 Birr. The minimum annual actual VAT revenue was 2176776.00 Birr whereas the maximum actual VAT revenue was 96369916.00 Birr.

4.4.1 Knowledge and skills

The influence of tax knowledge and skills on VAT collection among tax payers

using a cash register machine in the Sodo town administration in Wolaita Zone. The study findings outlined 117(55.7%) and 71(33.8%) strongly agree and agree respectively on the statement that Wolaita Sodo revenue branch creates awareness about collection of VAT cash register machine via TV, radio, pamphlets, newspaper, others media, 125(59.5%) and 74(35.5%) strongly agree and agree on the statement that VAT implementation can improve their business perception, 117(59.5%) and (39%) strongly agree and agree on the statement that tax payers have awareness about VAT collection using cash register machine, and 63(30%) and 84(40%) strongly agree and agree on the statement that ERM Wolaita Sodo revenue branch offered you adequate training on usage of collection of VAT cash register machine.

In addition to this, the mean and standard deviation indicate that knowledge and awareness play an important role in VAT collection using a cash register machine in Wolaita Sodo town administration. This is supported by the statement suggesting that Wolaita Sodo revenue branch creates awareness about collection of VAT cash register machine via TV, radio, pamphlets, newspaper, others media (mean=4.45 and SD=0.67), VAT implementation can improve your business perception (mean=4.54 and SD=0.59), tax payers do you have awareness about VAT collection cash register machine (mean=4.50 and SD=0.57), and ERM Wolaita Sodo revenue branch offered you adequate training on usage of collection of VAT cash register machine (mean=3.00 and SD=0.77).

These findings imply that positive improvement of taxpayers' knowledge and awareness will greatly lead to the improved VAT collection using the cash register machine. These findings are consistent with Obongo *et al*., (2018).

4.4.2 Tax evasion

84(40%) agree that measures that taken by the Authority over the enterprises for those evading tax payments are fair, but 84(40%) remain neutral and 42(20%) disagree. The average result indicates tax payers are neutral (mean=3.20 and SD=0.75) according to Al-Sayaad et al. (2006) classification. The result also revealed that a higher number of respondents disagree 23(40%) that there is a clear and easy way to identify VAT evasion using the cash register machine.

However, most of the respondents revealed that the audit follow up can reduce VAT evasion 125(59.5%) with mean 3.01 and standard deviation 0.69. The finding also reveals that 127(60.5), of respondents replied that VAT implementation using CRM can improve tax evasion. These results are in line with the findings obtained by Endashaw (2019) that audit follow up will reduce tax evasion in the Addis Ababa city

and Worku (2016) that using CRM and frequent follow up will reduce tax evasion in Lideta Sub-city.

4.4.3 Audit follow up

Audit follow up on VAT collection using CRM in Wolaita Sodo town Administration. Based on this, a large number of respondents disagree with the statements that Wolaita Sodo revenue authority branch VAT Audit follows up to enhance VAT revenue as per the schedule of the Authority 126(60%), that is, both disagree and strongly disagree, with (mean=2.20 and SD=0.98). This shows that there is a poor follow up, that does not discourage fraudulent activities, let tax payers learn from their past experiences, help them to make corrections and makes tax payers to fear and to follow the tax rules in case decrease tax evasion.

4.4.4 Operational costs

105(50%) of the respondents agreed with the statement that using a cash register machine collection of VAT can reduce administration cost, 84(40%) strongly agreed, none of the respondents disagreed, and 21(10%) of the respondents were undecided with the statement. The study findings suggested that most 189(90%) of the business operators want to collect VAT with the help of cash register machines. This implies that VAT collection through the cash register machine will reduce administrative cost.

Similarly, 47(22.5%) strongly agreed that their entity experienced additional costs after they registered to collect VAT using CRM while 98(46.6%) and 65(30.93%) agreed and remain neutral respectively concerning the statement. This implies that although VAT payers agree that using CRM to collect VAT reduces administration cost it also incur other additional costs such as compliance costs and operational costs. This statement is supported by the statements 3 and 4 that 140 (70%) and 184 (87.6%) disagree that using CRM reduces compliance costs and support to improve the operational cost of the Taxpayers. The results were in line with the findings of the Ryta (2017) that revealed administrative costs, reduce tax revenue transaction in Poland and other other OECD countries. Abubakari and Christopher (2013) evaluated taxpayers' attitude and perception and its influence and obtained that most revealed that they obtained perception and attitude plays role in tax collection which is consistent with this result.

4.4.5 Attitude and perception

Most of the respondents replied that their staff has enough skills to operate

CRM collection of VAT, that is, 160(76.2%) and most of the respondents perceived that VAT collection using CRM facilitate their business and government revenue. Similarly, a large number of respondents replied that ERCA/suppliers give technical training to improve the usage of CRM to collect VAT. The mean and standard deviation support the above claim with (mean=4.14 and SD-0.47), (mean=4.10 and SD=0.43), and (mean=4.04 and SD=0.39) respectively. However, most of the respondents 184(87.6%), both disagreed & strongly disagree, ERCA/suppliers gives immediate response for the problems related to machine usage.

4.5 Descriptive statistics on TOT collection

The average annual TOT revenue actually collected by using a cash register machine was 17493261.25 Birr with a standard deviation of 11618712.80 Birr from potential of average 21696292.81 Birr with a standard deviation of 12979093.72 Birr. The minimum annual actual TOT revenue was 3991002.00 Birr whereas the maximum actual TOT revenue was 37560785.00 Birr.

4.5.1 Knowledge and skills

The influence of knowledge and awareness on TOT collection among taxpayers using a cash register machine in the Sodo town administration in Wolaita Zone. The study findings outlined 21(36.6%), 7(12.3%) and 29(50.9%) agree, remain neutral and disagree respectively on statement that the Wolaita Sodo revenue branch creates awareness about collection of TOT cash register machine via TV, radio, pamphlets, newspaper, others media, 22(36.8%), 3(5.3%) and 32(56.1%) agree, remain neutral and disagree on the statement that VAT implementation can improve your business perception, 24(42.1%), 3(5.3%) and 30(52.6%) agree, remain neutral and disagree on tax payers do you have awareness about TOT collection cash register machine, and 30(52.2%), 23(40.4%) and 4(7.40%) strongly agree, agree and remain neutral on the statement that ERM Wolaita Sodo revenue branch offered you adequate training on usage of collection of TOT cash register machine.

In addition to this, the mean and standard deviation indicate that knowledge and awareness play an average role in TOT collection using a cash register machine in Wolaita Sodo town administration. This is supported by the statement suggesting that Wolaita Sodo revenue branch creates awareness about collection of TOT cash register machine via TV, radio, pamphlets, newspaper, others media (mean=4.39 and SD=0.71), TOT implementation can improve your business perception (mean=4.51 and SD=0.60), tax payers do you have awareness about TOT collection cash register

machine (mean=4.71 and SD=0.64), and ERM Wolaita Sodo revenue branch offered you adequate training on usage of a cash register machine for collection of TOT (mean=3.02 and SD=0.79).

These findings imply that a moderate improvement of TOT payers' knowledge and awareness will greatly lead to the improved VAT collection using the cash register machine. These findings are consistent with (Obongo et al., 2018). This implies a need of awareness creation to improve the collection of TOT using a cash register machine.

4.5.2 TOT evasion

22(38.6%) agree that measures that taken by the Authority over the enterprises for these evading tax payments are fair, but 23(40.4%) remain neutral and 12(21.1%) disagree. The average result indicates tax payers are neutral (mean=2.98 andSD=0.71) according to Al-Sayaad *et al.* (2006) classification. The result also revealed that a higher number of respondents disagree 23(40%) that there is a clear and easy way to identify TOT evasion using the cash register machine.

However, most of the respondents revealed that audit follow up can reduce TOT evasion 46(80.7%) with mean 3.2 and standard deviation 0.61. The finding also reveals that 35(61.4%) of respondents replied that TOT implementation using CRM can improve tax evasion. These results are in line with the findings obtained by Endashaw (2019) that audit follow up will reduce tax evasion in the Addis Ababa city and Worku (2016) that using CRM and frequent follow up will reduce tax evasion in Lideta Sub-city.

4.5.3 Audit follow up

Audit follow up on TOT collection using CRM in Wolaita Sodo town Administration. Based on this, a large number of respondents disagree with the statements Wolaita Sodo revenue authority branch TOT Audit follows up to enhance TOT revenue as per the schedule of the Authority 35(74%) with (mean=2.18 and SD=1.01). This is due to the fact that audit follow up reduces fraudulent activities, lets tax payers learn from their past experiences, helps them to made corrections and makes tax payers fear and follow tax rules & in this case, decrease tax evasion. In addition to this, most of the respondents revealed that using a CRM collection of TOT can simplify Wolaita Sodo revenue authority branch 40(70.2%) with standard deviation. This result is also supported by large mean value 4.0 with a standard deviation of 0.98.

4.5.4 Operational costs

The operational cost is one of the important factors influencing the use of a

cash register machine for TOT revenue collection. 4(7%) and 53(93) strongly agreed and agreed on the statement that using a cash register machine collection of TOT can reduce administration cost, 10(17.5%) and 47(82.5%) strongly agreed and agreed their organization experiencing additional costs after registered for CRM, 21(36.8%) and 36(63.2) strongly agreed and agreed respectively on cash register machine collection of TOT reduces your compliance cost, and 8(14%) and 49(86%) strongly agreed and agree on ERM Wolaita Sodo revenue branch support improve your operation cost respectively.

The mean and standard deviation also supports that TOT payers agree with statements that using a cash register machine collection of TOT can reduce administration cost (mean=4.07 and SD=0.25), cash register machine collection of TOT reduces entities compliance cost (mean= 4.37and SD=0.48), and ERM Wolaita Sodo revenue branch support improve your operation cost (mean=4.14 and SD=0.35) with small variation among the responses of the respondents as supported by the small standard deviation.

This result shows that using CRM for collecting TOT reduces administration cost, compliance cost and operational costs. This finding in in line with the findings of Abinet (2016).

4.5.5 Attitude and perception

The attitude and perception on using a cash register machine to collect TOT revenue in Wolaita Sodo Town Administration. Most of the respondents replied that their staff has enough skills to operate CRM collection of TOT, that is, 44(77.2%) and most of the respondents perceived that TOT collection using CRM facilitate their business and government revenue. Similarly, a large number of respondents replied that MOR/suppliers give technical training to improve the usage of CRM to collect TOT. The mean and standard deviation support the above claim with (mean=4.16 and SD-0.44), (mean=4.09 and SD=0.39), and (mean=4.04 and SD=0.32) respectively. However, most of the respondents 28(49.1%), both disagreed & strongly disagreed that ERCA/suppliers give immediate response for the problems related to machine usage.

5.0 Conclusion and Recommendations

5.1 Conclusion

The general objective of this study was to assess challenging factors to collect value added tax and turnover tax by using acash register machine on case of Wolaita

Sodo Town Administration, Southern Ethiopia and intended to answer research questions whether cash register machine audit follow up, knowledge and skills, tax evasion, attitude and perception, and administration cost have the effect on using a cash register machine in collecting VAT and TOT.

- The application of CRMs has a remarkable change on the VAT and TOT revenue. The findings of the research indicate that ERCA VAT and TOT income significantly increases after implementation of cash register machine in order to collect VAT and TOT. So, the cash register machine has a positive relationship with VAT and TOT revenue in Woliata Sodo Town.
- Electronic tax Registers increase the operating cost of the VAT and TOT payers that were incurred to collect VAT and TOT and also business income. A CRMs while improving the efficiency and thesuccess of VAT and TOT payers operations, provides timely and accurate VAT and TOT information to businesses and increases the availability of electronic tax filing.
- VAT and TOT evasion measurement, which is taken by the government is not enough and not fair furthermore, tax evasion decreases the revenue of government and the result shows that there is direct relationship with VAT and TOT revenue that means when evasion follow up increases the revenue of VAT and TOT increase.
- Audit follow up which taken place by the government in controlling the cash register machine user to collect VAT and TOT is not enough. Moreover, audit follow up affect tax revenue positively, while audit follow up increases tax income also increases.
- Perception and attitude about the implementation of cash register machine to collect VAT and TOT varies among the tax payers. It has positive and significant influence among the TOT payers but it has no statistically significant influence among the VAT payers. This is may be due to the long experience of using cash register machine among VAT payers whereas few experience TOT payers. This calls frequent training is needed for TOT payers about the uses and impacts through various media and ERCA experts.

5.2 Recommendations

Implementing cash register machine plays an important role in collecting both VAT and TOT revenues. So, in order to succeed in the using a cash register machine, the town administration must improve its policy according to the conditions. Based on the findings and limitations of the study, the following recommendations were forwarded:

- Knowledge and skills of using a cash register machine play an important role in improving the revenues of VAT and TOT revenue. So, the tax administration office should look the ways to improve the skills and knowledge of the machine through various media such as TV, radio, Facebook, twitter, etc.
- The tax administration office should make subsidy and other incentives for the machine importer to decrease the cost of the machine and to increase the number of machines imported to meet the demand of the tax payers.
- Properly control accreditation of machine suppliers to minimize repetitive machine failure and makes sure whether they give proper training by using competent staff or not. Frequent training is needed to change the perception and attitude of using the machine to collect tax.
- The tax administration office is better to designed goods and fast systems that can reduce the time of users of cash register machines to make correction for their errors without wasting time and additional cost.
- Awareness of the people is very important to eliminate the tax evasion and enhance the efficiency of the authority, but the tax administration office doesn't work with regard to creating enough awareness through different mechanisms. This can be achieved if the tax administration office give training to layman people while they are at school in the form of course.

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