



**ST MARR'Y UNIVERSTITY
SCHOOL OF GRADUATE STUDIES**

**CHALLENGES AND OPPORTUNITIES OF
ADOPTING E-TAX SYSTEM IN THE CASE OF
ERCA (LTO)**

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ADOPTING E-TAX SYSTEM IN THE CASE OF
ERCA(LTO)**

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Accounting and Finance**

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DECLARATION

I, the undersigned, declared that this thesis is my original work and has not been presented for a first degree or master's degree in any other university, and that all source of materials used for this thesis have been duly acknowledged.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

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St. Mary's University, Addis Ababa

Signature

June, 2018

ACROMYMS

ATM - Automatic Teller Machine

ECHR - European Convention on Human Rights

ERCA – Ethiopian Revenue and Customs Authority

E-TAX - Electronics tax filling System

HMRC - Her or His Majesty's Revenue and Customs (in United Kingdom)

ICF - Investment Climate Facilitation for Africa

ICT - Information and Communication Technology

IRS - Internal Revenue Service (USA)

ITD - International Tax Dialogue

LTO – Large Tax Payers Office

LTP – Large Tax Payer

SIGTAS - Standard Integrated Government Tax Administration System

TAM - Technology Acceptance Model

VAT – Value Added Tax

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ABSTRACT

The study determine the challenges and opportunities of adopting E-Tax system in case of ERCA Large Tax Payers Office. Population of the study consist Ethiopian Revenue and Customs Authority LTO staff. The study was conducted based on the data gathered from Large Tax Payers Office staffs. The result of the study indicated that, the major challenges of ERCA faces in the adoption and development of E-Tax system are, lack of customer awareness, limitation in network infrastructure and internet related support services. The study identified operational and services benefits from adopting and developing of E-Tax system such as increase productivity, reduces paper work, reduce transaction cost, increase reliability and reducing errors. Among the different driving forces that initiate ERCA to adopt E-Tax system: Desire to improve the relationship with customers, Desire to build organizational reputation, Desire to keep tax payer information safely. The study also indicated existing opportunities for the Authority realized service benefits like, facilitate development of new system, improve customer service, increase accessibility of tax payer services; the Authority should work together with other concerned bodies such as ethio-telecom, Ethiopian electric utility and so on to solve the challenges that hinders e-tax system.

Keywords: - E-Tax, Ethiopian Revenue and Customs Authority, Large Tax Payers office

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CHAPTER ONE

1. INTRODUCTION

1.1 Background of the Study

Governments today are under an increasing pressure to improve the delivery of public services in cost-effective ways. Despite numerous challenges most governments have turned to e-government led solutions like electronic tax filing (e-filing) (Ojha et al., 2011). To date, the use of ICT is prominent in business and tax settings. Notably, tax authorities around the world are using electronic tax administration system to interact with taxpaying public in tax collection, administration and compliance settings. Technology has influenced the way we work, play, and interact with others. Much remains to be done in many countries to build effective tax administrations. High turnover of senior staff, weak headquarters, inadequate/unstable financing are recurrent concerns, as especially in developing countries are weaknesses in auditing, taxpayer services and legal frameworks. IT developments offer considerable opportunities but also pose new compliance problems (International Monetary Fund, 2014).

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, 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).

Today, the Ethiopian Revenue and Customs Authority (ERCA) has brought significant benefits to the business community and Ethiopia's wider economy through its recently developed e-Tax system. Now, taxpayers can file their tax returns online, within one day and with just three procedures. Quick and easy payment of taxes is expected to promote compliance and lead to better revenue collection.

This paper assesses the Challenge and Opportunities of Adopting E-TAX System in Ethiopia revenue and Customs authority and it forward some recommendation for this organization since it adapts the e-Tax system.

1.2 Background of the Organization

The Ethiopian Revenues and Customs Authority (ERCA) is the body responsible for collecting revenue from Customs duties and Domestic taxes. In addition to raising revenue, it is responsible to protect the society from adverse effects of smuggling and contraband. It seizes and takes legal action on the people and vehicles involved in the act of smuggling, any tax evasion and avoidance while it facilitates the legitimate movement of goods and people across the border.

Establishment of ERCA

The Ethiopian Revenues and Customs Authority (ERCA) was established by the proclamation No .587/2008 on 14 July 2008, by the merger of the Ministry of Revenue, Ethiopian Customs

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Authority and the Federal Inland Revenue Authority for the purpose of enhancing the mobilization of government revenues, while providing effective tax and Customs administration and sustainability in revenue collection. The main objective of the establishment of ERCA was to streamline the public revenue generation function by bringing the relevant agencies under the umbrella of the central revenue collector body.

This structuring aimed at improving service delivering, facilitating trade, enforcing the tax and customs laws and thereby enhancing mobilization of Government revenue in sustainable manner. A study called "Business Process Re-engineering" had taken place before the merger of the foregoing administrations. The study was undertaken for a year and half beginning from November 2007 by teams of officials selected from within the administration.

The study has looked into the selected key business processes and has come across inefficient organizational structure and unnecessary complicated procedures that permitted insufficient service delivery. The study has also indicated that there was corruption within the administrations and that smuggling and tax evasion were serious problems. These problems have depressed the attempt of the foregoing administrations to be successful in achieving their objectives.

Documents for the import and export goods were processed through the former tax and customs administration and due to the inefficient procedures, these goods were subject to delay at exit or entry points of the former customs Authority. Owing to it, importers or exporters viewed the former customs procedure with disfavor or looks as an impediment for international trade. The former tax and customs administration also has long been criticized for lack of efficient and effective system to control tax evasion.

The administration had inefficient system to control taxpayers who fail to declare their actual income in order to reduce their tax bill and the federal government's revenue. The former administration was also far behind in protecting investors from adverse effects of contraband and illegal practices. In its proposal, the team has suggested merger of the foregoing three administrations. The study team believed that it would be better if the three administrations merged, forming a single powerful organization to increase modern and equitable tax and customs administration system, effective resource utilization and quick service delivery. Presently, the

Authority is exercising the powers and duties that were granted to the Ministry of Revenue, the Federal Inland Revenue Authority and the Customs Authority by existing laws.

1.3 Statement of the problem

In fact, in modern tax administration when tax administration is organized a unit for large tax payer it will have a better performance of revenue collection. It is beneficial to set up large tax payer office (LTO) that should be allocated a large share of administration resources than their numbers would suggest. Indeed, LTO are so popular among advisors on tax administration policy that, without an LTO, a tax administration is unlikely to be called modern. However, LTO is a structure for large tax payers, not only for the functional but also a better management of complaints. During the studies there are 1156 private organization and 284 Government organization included in LTO. Where this data show us that the authority give focus for the treatment of effectively organizing human resource, equipment and financial to achieve this purpose.

However, the fulfillment of structure and utilizing resource is not by itself a solution for effectiveness and efficiency of tax administration. On other hand to have a better revenue performance, as (Andrew 2014) stated that the administration need a better efficiency that help to reduce tax payers compliance costs, eliminate duplication and decrease tax administration costs by implementing information systems. In addition to this it creates effectively come through a better tax payer service, more collection enforcement and more effective audit programs.

A tax authority engages in many activities, such as processing returns and related information from taxpayers, entering tax return data into a database, matching returns against filing requirements, processing tax payments and matching them against assessments, and issuing assessments and refunds. One way to boost a tax authority's efficiency is by expanding its use of Information and Communication Technology (ICT). Such technology can facilitate a broad range of services, including registering taxpayers, filing returns, processing payments, issuing assessments and checking against third-party information (Clarke, 2001).

Various survey studies have been conducted to assess the implementation of E-tax filing system.

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For instance a set of studies have been conducted on the challenges and benefits of adopting E-tax filing system and its effect on tax compliance (Naibei et al., 2011; Gayathri P et al., 2013 Gekonge J et al., 2016; and Harrison et al., 2015).

Adoption of e-tax filing and payment system has become fundamental as many countries adopt Information systems in tax management. E-tax systems improve tax filing and payment efficiency and effectiveness. E-tax filing system is equally important for all countries but as far as the researcher's knowledge there is lack of empirical studies which examine the Ethiopian tax office. The studies conducted in Ethiopia mainly focus on taxpayer's perception (Ruta, 2017; Samson, 2016)

This study is therefore motivated because of the absence of studies in the area of E-tax filing system: what are challenges and opportunities of adopting E-Tax system in Ethiopia. Moreover, it is important to notice that Ethiopia's environment is different from the developed countries environment where the E-tax filing system is more enhanced.

Hence, the main aim of this research is to investigate what are challenges and opportunities of adopting E-Tax system in case of ERCA Large Tax Payers Office.

1.4 Research Questions

The study has the following research questions.

1. How the current practices and extent of E-Tax service in ERCA LTO?
2. What are the benefits of adopting E-Tax service from the viewpoint of the ERCA LTO?
3. What are the driving forces towards the adoption of E-Tax service in ERCA LTO?
4. What are the major challenges for the adoption of E-Tax service in ERCA LTO?
5. What are the existing opportunities for the adoption of E-Tax service in ERCA LTO?

1.5 Objective of the Study

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

1.5.1 General Objective

The main objective of the study is to assess the Challenges and Opportunities of Adopting E-Tax System in Ethiopia revenue and Customs authority.

1.5.2 Specific Objectives

The general objective split in different specific objectives:

1. To assess the current practice and extent of adoption of E-Tax in ERCA LTO.
2. To find the benefits realized by ERCA LTO in the adoption and practice of E-Tax delivery service for tax payers.
3. To identify the driving forces towards the adoption of E-Tax in ERCA LTO.
4. To identify the major challenges for the adoption of E-Tax in ERCA LTO.
5. To identify the existing opportunities for the adoption of E-Tax in ERCA LTO.

1.6 Significance of the study

The result of study is primary expected to contribute to ERCA's continued effort in enhancing its tax administration reform. The assessment and recommendation on existing internal work flows and service delivery modalities could also be a starting point or complimentary to 'citizen-centric' effort of ERCA and ERCA might able to see its level and performance of tax collection and learn some lesson and build up some corrective measures for the weakness based on recommendation . Further, the study has paramount use for different stake holders who are interested for such as government agencies and business association.

1.7 Scope and limitation of the study

The first limitation lies on the subject matter itself. E-Tax is a broad subject. It covers both technical and non-technical aspects. The study has not addressed the technical issues of the system as constrained by lack of expertise by the researcher and time. But, even time and expertise could be there, the level of willingness from ERCA to open up itself for such assessment was very limited.

Moreover, the study faced with a limiting factor from lack of willingness to provide full data (with the 'pretext' confidentiality' requirement) as well as availability of up-to-date and comprehensive primary data on the study variable. Effort was made to fill these gaps by using methodological triangulation from secondary sources, as there was also usually tendency by the interviewees to direct you to such secondary sources for further information or data

1.8 Organization of the Study

This thesis paper organized into five chapters. The first chapter is the introduction part which consists of the background of the study, history of E-Tax development in Ethiopia, statement of the problem, objectives of the study, research questions, significance of the study, and delimitation of the study. The second chapter introduces related literature review which deals with the theoretical and empirical literatures. The third chapter deals with research design and methodology of the study. The fourth chapter concerned with findings and discussion of the study. The fifth chapter which is the last but not the least focused on summery of findings, conclusions, and recommendation of the study.

CHAPTER TWO

2. LITRATURE REVIEW

This chapter contains theoretical and empirical literature. Theoretical literature deals with concepts of e-tax filing and ERCA's e-tax filing system. Related empirical findings present the benefits and challenges of e-tax filing system.

2.1 Meaning and concept of Tax

A number of authors have tried to define the term tax; however, it is hard to say that these attempts at coming up with a definition for the term have been successful (mainly owing to the fact that too great precision is attempted in a single sentence). The best way to understand the term is to state the fundamental idea of a tax and afterwards to note its leading characteristics. Accordingly, in general terms, tax can be defined as a contribution from individuals out of their private property for the maintenance and defense of government, so that it may perform its functions and the ends of the state be realized (Misrak, 2008).

In similar, Tax is defined as 'a compulsory levy, imposed by government or other tax raising body, on income, expenditure, or capital assets, for which the taxpayer receives expenditure, or capital assets, for which the taxpayer receives nothing specific in return' (Lymer, et al.2009).

Tax administration is a complex and dynamic responsibility. On a regular basis, leaders are faced with new issues, conflicting priorities, taxpayer compliance and emerging commitments (Thomson, 2008). As Berhan and Jenkins (2005) noted, governments of developing countries are eager to create modern tax systems although saddled with weak tax administrations, and sometimes have experimented with tax administration mechanisms that inflict higher compliance costs on the private sector.

In order to make the multipart tax system relatively successful, it should be approached strategically and realistically in order to maximize taxpayer participation, create an efficient filing

and audit administration, and encourage private sector growth. Tax involves every aspects of income generating activities and consumption items, and requires not only administrative capacity of revenue authority but also the involvement of private sectors through proper accounting and reporting (Tadros, 2009).

2.2 E-Taxation Concept

Electronic tax system is a system that has been developed to replace manual system. It is a web-enabled and secure application system that provides a fully-integrated and automated solution for administration of domestic taxes. It enables taxpayers to register tax, returns filing, payment registration to allow for tax payments and status inquiries with real-time monitoring of accounts (Waweru 2013).

According to Chang and Hung, (2005) E- tax filing is a system for submitting tax documents to the tax department through the internet or direct connection, usually without the need to submit any paper documents. Various tax return preparation softwares with e-tax filing capabilities are available as standalone programs or through websites or tax professionals or from major software vendors for commercial use. “e - File is the term for electronic filing, or sending your tax from tax software via the Internet to the tax authority”.

Chanchal, et al (2013) on their study about the satisfaction level and awareness of tax-payers towards e-filing of income tax return in Moradabad city defined E-filing as the process of filing tax electronically. Taxpayers no longer stand in long queues and no waiting for filing. Customized forms have been devised by the Tax Authority which is available on the site. These forms have been devised with such details that tax payers need not file any supporting document along with.

According to International Tax Dialogue (ITD) (2010), revenue patterns in most countries show that a small number of large enterprises account for the majority of tax revenue (60-70% of total tax revenue). Usually, this majority of tax revenue is classified/ termed under Large Taxpayers.

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Due to complexity of large taxpayers and considering their critical role in revenue collection; it is the responsibility of tax administration to be ahead of large tax payers in technology in order to curb cheating (Chatama, 2013). Guiterreze (2010) recommends the adoption of an integrated management model, which presumes use of electronic filing as one system component, for the adequate functioning of tax administration that aims enhanced compliance, evasion reduction, and increase in tax revenue.

McCarten (2014) emphasized that for large tax payers in order to accomplish its intended goal/purpose, countries should work towards, among other strategic interventions, reducing the potential for corruption by automating and restructuring control systems; and simplifying and reducing paper handling through appropriate use of electronic filing.

Electronic tax payment is first coined in US and implemented in this country. Australia is among the first countries that had implemented the system (Turner and Apelt, 2004). Today, electronic taxation has been extended too many countries.

Electronic taxation differs among countries hence the name of the system also differs from country to country. Electronic declaration is named electronic tax filing (Gellis, 1991) in international literature. E-tax payment is also called online taxation payment (UN, 2007) or e-tax lodgment (Turner and Apelt, 2004).

Mongwaketse (2015), quoting Singh and Singh (2013) explain that for a taxpayer to access e-tax filing they have to first register online and showed the process as follows:

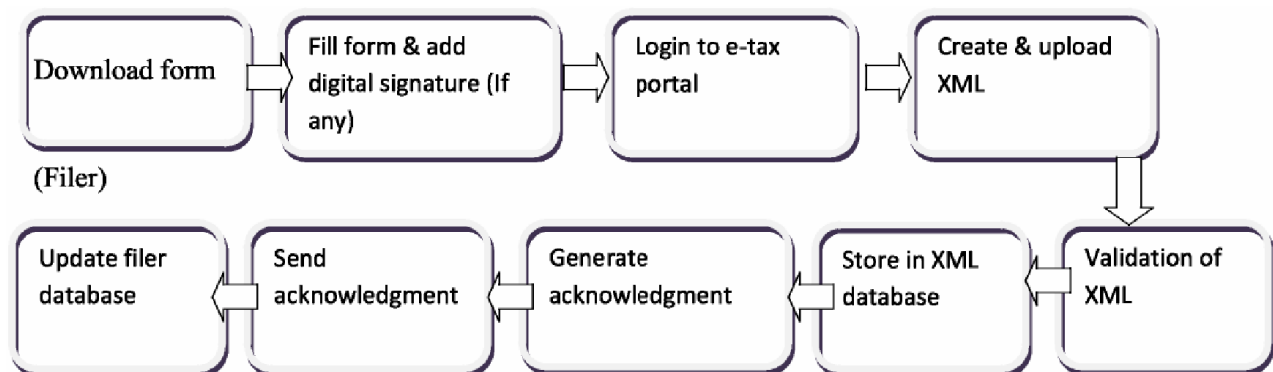


Figure 2-1. Steps For e-tax filing of Tax return (Singh & Singh, 2013)

The Functions of E-Tax

Electronic tax filing, or e-filing, is a system for submitting tax documents to a revenue service electronically, often without the need to submit any paper documents. Electronic tax filing systems are an e-government application that is being utilized with increasing frequency all over the world. Such systems are particularly favorable for governments because they avoid many of the mistakes taxpayers make in manual filings, and they help to prevent tax evasion by data matching (Manly et al, 2005). The data houses developed using electronic tax filings can allow tax inspectors to analyze declarations more thoroughly, and enable policy makers to develop fairer and more effective (Henry, 2011).

According to National Informatics Centre, WBSC e-tax filing user manual, in France for using the e-filing of Return shall be fulfilled the following Pre-requisite; there are: Userid and Password, password must be changed when you log in for the first time, file electronic return using „Download/ Upload Return Filing“ method, and finally Client computer installed (WBSC, 2014).

The Tribunal judge held that the failure of the VAT Regulations 1995 to take account of a person's ability to comply on account of: age, disability, computer illiteracy (linked to age), or remoteness of location Was a breach of the European Convention on Human Rights (ECHR), the judge also held that the Filing by Telephone service was an unlawful concession that had not been properly published and that the availability of this service to appropriate businesses could therefore not heal the aforementioned human rights breach, and having carefully weighed up the options, the Government has decided to clarify the legal position beyond any possible doubt.

So the HRMC change the previous policy to the later one, which is: review the VAT Regulations 1995 to ensure beyond doubt that they provide a means for all VAT registered businesses (except the very small number that are exempt) to file VAT returns by approved electronic means. Publish guidance, setting out that what VAT registered businesses should do if they are having difficulty filing VAT returns online; and the circumstances in which HMRC will consider allowing businesses to use the Filing by Telephone service and the process to be followed by businesses who consider that they need to file by telephone. And consider changes

to the Filing by Telephone service to ensure that it meets the needs of businesses that are unable to file returns online using the current approved forms of electronic return system without the assistance of others (HRMC, 2013).

2.3 Definition of E-Filing and E-payments

E-filing

For the purposes of this paper we will define e-filing as the transmission of tax information directly to the tax administration using the internet. Electronic filing options include (1) online, self-prepared return, using a personal computer and tax preparation software, or (2) online submission of returns using a tax professional's computer and tax preparation software.

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For a long time, government services have been regarded as synonymous with bureaucracy in both developing and industrialized countries. The tenets of Weberian bureaucracy include such factors as organized hierarchy, development of standardized and impersonal procedures, formal division of labor and responsibility, and emphasize efficiency in all procedures (Kun, et al,2008). All countries have bureaucratic state mechanisms; and while many commercial organizations are strongly inspired by the tenets of bureaucracy, their efficiency varies widely.

Whatever the level of efficiency of the bureaucracy, the availability of computers to people from all walks of life has brought them better and more convenient access to public services. Additionally, through the Internet and computer technology, governments can provide services in the original positive sense of Weberian bureaucracy. In other words, e-government can facilitate

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public service offerings in a truly standard, impersonal, efficient, and convenient manner for both service provider (the government) and service recipient (the citizens). In some cases a government agency can also be a service recipient of an e-government service. In economic terms, the ability of citizens to access government services anytime, anywhere helps to mitigate the transaction costs inherent in all types of government services. (Kun, et al, 2008).

Layne and Lee, (2001) propose a four stage model for e-government maturity:

- ✚ Catalogue: Online presence, catalogue presentation, downloadable forms.
- ✚ Transaction: Services and forms on-line, working database supporting online transactions.
- ✚ Vertical integration: Local systems linked to higher-level systems.
- ✚ Horizontal integration: Systems integrated across different functions, real one-stop shopping for citizens. Although the model is based on the e-government experiences in the US context, the authors assert that it is applicable to other countries' stages of growth.

For web-based information systems to remain useful, they must contain new, enhanced attributes.

Belanger, et al (2006) argue that there are several success criteria for a web site depending on the variety of goals such as selling, informing and advertising. The authors further argue that web site success is audience specific and it should take account of diverse perspectives of users and owners. It should be noted that sometimes these perspectives might be even competing. For example, in electronic tax filing systems users are usually unenthusiastic to pay tax and the site owner (government) is eager to collect it.

In their research for electronic tax filing system in Taiwan, (Fu, et al, 2006) extended the technology acceptance model (TAM) to include such Theory of Planned Behavior parameters as subjective norms, self-efficacy, resource facilitating conditions and technology facilitating conditions. In yet another article, the same authors (Fu, et al, 2004) also compared user satisfaction with the three methods of tax filing (manual, two-dimensional barcode, web-based) in Taiwan, according to such parameters as ease of data entry, correction, operation, learning and data submission, explanation completeness, filing form neatness and total filing time.

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According to (Palmer, 2002) electronic tax filing systems can be evaluated in terms of usability, design and performance including download delay, navigability, site content, interactivity, responsiveness, user satisfaction, the likelihood of return to the website and frequency of use.

According to (Harold, 2011), Computer-generated returns, transmitted electronically, generally are easier to process than paper returns; since the information on the forms doesn't have to be keyed in, number by number, by IRS staff into the Service's computers hence there is less chance of errors. Electronic transmittal is instantaneous, bypassing the frustrating vagaries of the postal system and the client receives confirmation within a day or two that the return not only was received by the IRS, but was received accurately.

However, from an American experience, electronic tax filings' biggest advantage, from the taxpayer's point of view, is that it shortens the time for refunds from an average of 12 weeks to about 3 weeks. Refunds can even be deposited directly into taxpayers' bank accounts. As an added incentive, some vendors that provide electronic filing services for tax preparers also offer a service in which clients due a tax refund can apply for an immediate bank loan equal to the expected IRS check. As a result, a client could receive the refund (less bank and preparer fees) within three days of the filing (Harold, 2011).

2.3.1 History of E-Filing and E-payment

An e-filing program was first introduced by the US-IRS as a pilot project for the 1986 filing period with the primary objective of improving its efficiency in processing tax returns. Prior to the launching of the project, the IRS worked closely with tax-preparation software providers and tax professionals to ensure a successful launch of the program. During the test year, the IRS offered e-filing services in three cities and restricted the types of taxpayers and the types of return that could be filed electronically – e.g. tax preparers were only allowed to file returns with nil balances (Denise, 2008).

2.3.2 E-tax filing system in Ethiopian Revenues and Customs Authority (ERCA)

Historically, in Ethiopia the tax returns were filed manually and hand-delivered to the nearest office. According to Fortune (2013) ERCA's highly manual tax system has spent significant amount of its payroll budget on handling paper returns and transcribing data to machine readable

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form.

E-tax filing system, which ERCA has been implementing for both large and medium tax payers, was installed in 2009 by CRC Sogema, a consulting firm based in Canada, with a 90,000 dollars financial support from the Investment Climate Facilitation for Africa (ICF). There are two ways in which e-tax filing can be accessed; by directly using the authority's website and authenticating through two security layers and declaring tax (Fortune, 2015).

The World Bank Doing Business (2014) said that, on the online service delivery status ERCA is in its premature stage. Still, the need for manual reporting and appearing to a tax office is unavoidable.

According to Ato Birhanu, Head of Customers Education and Support Team Coordinator, interview with ERCA's official monthly newsletter (Gebi Leleamat #47), e-Tax has the capacity to provide internet/online services via ERCA's website or a dedicated website: www.etax.gov.et. If used at full capability, e-Tax is expected to provide services such as online tax registration (e-Registration), online monthly and annual tax declaration (e-tax filing), online possibility to effect payment through an option called Bank Interface, online tax clearance and tax refund request service (Online e-Service) and online correspondence that help tax payers to request questions and clarification from ERCA.

In the Practice, Challenges, and Prospects of e-Government; the case of ERCA study (Samuel, 2015) E-Tax is described as a large public application designed to work with the Standard Integrated Government Tax Administration System (SIGTAS). It is a product that allows taxpayers to file electronically and to see and print their declarations on line. For security reasons, the e-Tax database is separate from SIGTAS database. An e-Tax user does not have a direct access to SIGTAS database but declaration changes are done in SIGTAS and are automatically reflected in e-Tax. A communication mechanism between the two applications allows data to flow from one database to the other.

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The main web page of ERCA has almost all common information for taxpayers. Taxpayers can find all necessary legislation, tax forms and information about main tax procedures. The web page includes a register of VAT taxpayers, public tenders by tax administration, duties and rights of taxpayers, phone numbers, acts on the amounts necessary to calculate tax obligations, short presentations on some taxes and an introduction to the tax administration (its duties, organization, working hours and annual report). It also offers links to other useful web pages (Gebre, 2006)

Gebi Lelemat #47 asserted the confidentiality of the system. ERCA employees are prohibited from divulging any taxpayer's information to third parties. Therefore with electronic filing the taxpayer is empowered to take control of the security of his or her information or data, by securing their login details (login name & password). The confidentiality of taxpayer data is thereby guaranteed within the system of tax administration and ERCA also enforces strict disclosure rules for all taxpayer data for data flowing outside the Tax Authority.

However, the tax authority should be proven that the Tax payers ability of using this technology. According to ERCA it is a necessary step to give training for tax payers on etax to help them effectively carry out any activity in their respective organizations. While people prepare their return by answering some simple questions asked by the system, they go on recording the answers in simple step by step manner. Apart from this, people need not know the tax laws or need not even remember the various subsections of the tax laws.

2.4 Benefits of Implementing E-Filing and E-Payment system

Several benefits of electronic filing system have been discussed in literatures. Anna & Yusniza (2009) conducted a study on Adoption of tax e-tax filing in Malaysia and stated that e-tax filing allows customers to conduct transactions within a few mouse clicks. This convenience can serve as a key driver of e-tax filing adoption. E-tax filing provides many aspects of 'convenience' to taxpayers (that is time to file, place to conduct the filing, ease-confuse, information searching and online transactions) at a degree that is not available through traditional channels. Accessibility is allowed 24x7x365. E-tax filing also offers flexibility of time and reduces calculation error on the

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tax return form to the taxpayers.

Furthermore, Goolsbee (2002) confer benefits of e-tax filing to service providers, which are the tax authorities. To the service provider, e-tax filing minimizes their workload and operational cost due to the submission of tax returns in a paperless environment. It also reduces the cost of processing, storing and handling of tax returns.

In addition, as Moyi & Ronge (2006) affirmed on their study on Taxation and Tax Modernization entrusting sensitive negotiations to special teams; minimizing contacts between tax payers and tax collectors and reducing the discretionary powers of tax officers; setting up supervisory systems with at least three hierarchical levels to reduce benefits for collusion; and devise incentive systems that match public and private interests.

Joanna (2014) in her study on implementing electronic tax filing and payment in Malaysia, stated that E-tax filing system increase the quality and quantity of information available to tax officers, enabling them to complete transactions faster and more accurately. Returns filed electronically have much lower error rates than paper returns and substantially cut the need to impose penalties and other punitive measures to foster compliance. The more efficient handling provided by electronic returns allows tax officers to issue assessments and refunds more quickly, and taxpayers know right away if their returns have been accepted by the tax authorities. E-tax filing lowers the cost of handling returns—allowing administrative resources to be reallocated to other tasks such as auditing, customer services and tracking non-compliance.

The study extends in stating e-tax filings benefits in allowing for better, safer data storage that can be used to implement a risk management system for auditing and enforcement. Automation helps establish a good system for tracking files, which is essential for effective auditing and increases the speed and quality of data provided to auditors. Taxpayers can correct their mistakes or make and save changes many times before the final submission which diminish tax authorities checking work load. Finally, well-designed electronic systems can lower corruption by reducing face-to face interactions.

In addition, Al-Kibsi, et al (2001) in their book “Putting Citizens Online, Not In- line” suggested putting services on-line substantially decreases the processing costs of many activities compared

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with the manual way of handling operations. For example, it costs the US Inland Revenue

Service \$1.60 to process a paper tax form, but only \$0.40 to process an electronic form. The appropriate application of e-tax may possibly reduce the number of inefficiencies in processes by allowing file and data sharing across government departments, thereby contributing to the elimination of mistakes from manual procedures, reducing the required time for transactions.

E-tax filing also benefits in better access to information, employee productivity and improved service delivery. Strategic benefits are generally impossible to quantify in monetary terms, but their value is undoubtable. For example Business Analytics is one example where data warehouse that can be queried to collect customized data on segments of constituents available for their decision-making process (Kavanagh, 2007).

By using electronic filing system governments expect to achieve such gains as online data collection to reduce data entry costs and automate error checking, reduce the communication costs with citizens, enhanced uniformity in the treatment of the applications, greater re-use of data, reduce government publication and distribution costs through online publication (OECD 2003).

2.5 Challenges in Implementing E-Filing and E-Payment Systems

The basic prerequisites for implementing successful e-filing and e-payment systems are:

- ✚ are liable and accessible internet service;
- ✚ cooperative financial institutions;
- ✚ an IT oriented public;
- ✚ Adequate financing to set up the appropriate infrastructure in tax offices.

Ideally, the setting of an e-filing and e-payment system should form part of a comprehensive IT design, development and implementation strategy.

The implementation process for e-filing and e-payment systems begins with the development of a strategic business plan – documenting the ideas and actions, desired outcomes and the time frame for each component, taking into account the strengths and weaknesses of the tax administration

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and environmental opportunities and threats. The plan should also document the implementation strategy including the implementation approach. Many countries have taken a gradual approach by allowing voluntary e-filing and e-payment for select segments of the taxpayer base, e.g. individuals or companies only, in the initial stages to allow for live testing of the system. After testing is complete filing becomes mandatory for some taxpayer e.g. companies.

The design of systems will depend on the environment within which the tax administration operates, the quality of its business processes, and the amount of funds available for system development. However, implementation of most e-filing and e-payments include the following three steps:

- ✚ Developing a program for the preparations of returns which:
 - ✓ is extremely user friendly;
 - ✓ Allows data import from taxpayer's system; and
 - ✓ has a special version for tax practitioners;
- ✚ Developing a system with appropriate IT modules and firewalls to receive and validate electronic returns; and
- ✚ Developing an electronic fund transfer system which:
 - ✓ is safe and secure;
 - ✓ Permits taxpayers to schedule payments on different dates; and
 - ✓ Ensures the only amounts declared in tax returns can be debited from tax payer accounts (Denise, 2008).

Sweeney et al., (1999), on their study about the role of perceived risk in the quality-value relationship substantiate that tax authorities face some major challenges towards the implementation of the e-tax filing system. One such challenge is the public perception of the e-tax filing system. After using an e-service over the Internet, the public may find the e-service system easy and useful or otherwise. Since the public cannot directly communicate with tax personnel, see or touch the tax forms as the service is provided online, the e-tax filing service system delivered to them may not perform as expected. In addition, the public may be burdened

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by the time and effort spent learning the new system and accommodating any services failure. Although time is a non-monetary effort and varies among individuals, researchers have recognized that time is a cost that users must pay for any use of services.

Another challenge regarding public perception was stressed out by Chang et al. (2005) as perceived credibility on their study about the impact of quality antecedents on tax payers' acceptance of Internet tax-filing systems. The study defined perceived credibility as the extent of users' confidence in the Internet tax-filing system's ability to protect the user's personal information against computer hackers or cyber-crime as it is popularly known. A credible website needs to safeguard personal information from unauthorized access or disclosure, accidental loss and alteration or destruction.

Therefore, as Joanna (2014) said reluctance of taxpayers to abandon paper-based processes because of their perception and shift to electronic system is one of the reasons which make the number of taxpayers using the e-tax filing system remained far below expectations.

Another major challenge supposed by Anna & Yusniza (2009) on their study on the adoption of tax e-tax filing in Malaysia, is to ensure that the system runs smoothly and efficiently during the tax filing period each year. This refers to the technical aspects of e-tax filing, i.e. computer and information systems utilized for the e-tax filing system need to be stable and reliable enough to handle a amount of information processing, especially during the peak period of e-tax filing and particularly as the deadline approaches. The service provider has to ensure that the e-tax filing system can handle the heavy processing of data during the month of tax submission without any glitches. Another critical issue on e-tax filing is that the tax authorities have to ensure that the confidentiality and privacy of the information submitted through the Internet is preserved.

Tamami (2006) on his thesis done in Washington, D.C. titled "An analysis of the effect of electronic filing on individual income tax compliance" stated that since there is no perfect system anywhere, there should be a helpline and other forms of real time support for taxpayers who may encounter problems in using the system. Also there should be detailed help manual on how to complete tax forms. Where necessary there should be free downloadable software on the website

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for preparing tax returns.

As the study extends it stated that the system be available always. Downtime should be minimized otherwise taxpayers will consider it unreliable and therefore prefer the manual process. This is particularly important during filing and payment deadlines. Given the last minute compliance tendency of most taxpayers the authorities must envisage and cater for the high traffic in and around key tax filing deadlines.

Dwilson (2014) on his study on disadvantages of electronic filing says another challenge with e-tax filing is its inability to provide automated online assistance to a taxpayer with a complex income structure. Therefore for such taxpayers trying to get help on a complicated tax question from a website help-desk may not be nearly as useful as getting help from an in-person tax professional.

According to the (World Bank Doing Business, 2014), Sub-Saharan economies face particularly difficult challenges with implementing electronic systems for filing and paying taxes. These economies are also characterized as part of the world where citizens face limited broadband access, power shortages, slow network speeds and system failures.

Some additional challenges in which tax authorities experience was explained by (Layton, 2007) on his study on information security: design, implementation, measurement, and compliance, as lack of leaders and management support, resistance to change by staff members who are in their comfort zone in using the manual system and retaining good IT staff members.

Having and retaining good IT staff members was also given emphasis by Korpela et al. (2000) on their study about the commercial scenarios for the web: Opportunities and Challenges. The study implies the methodologies for developing information systems, generally, are taught mostly in academic and professional institutions in developed countries and focus on organizations with relatively abundant resources and other favorable conditions. For example, a group of researchers note that information system development practices need modification to work in local African conditions. “The information system development practices and methodologies being taught and

used in industrialized countries have been designed with a much more affluent and less constrained setting in mind than which African information and communication technology (ICT) actors find themselves in. Information system development practices are not universal as such, but need to be adjusted to any given socioeconomic, cultural and organizational setting”.

As stated by Mongwaketse (2015) on his MBA paper titled “Perceived effects of an electronic filing system on tax compliance in a district municipality, South Africa”, e-tax filing system is not completely independent of human intervention and taxpayers cannot perform certain functions online, and as a result they still need to visit tax offices and queue for assistance. One such example is tax registration. The taxpayer can perform tax registration online, but afterwards is required to visit the office in order to show supporting documents or for payment.

2.6 Tax Compliance

Tax compliance has been defined by the Harvard law school as paying taxes on time and timely reporting of correct tax information. Therefore, tax compliance means seeking to pay the right amount of tax (but no more) in the right place at the right time. Where right means that the economic substance of the transaction undertaken coincides with the place and form in which they are reported for tax purposes.

According to (Brown and Mazur, 2003), tax compliance is categorized into three multifaceted components; filling, reporting and payment.

Holtzman, (2007) states that tax compliance is the value of the tax payer’s own time and resources along with any out of pocket costs paid to the tax preparers and other advisors, invested to ensure compliance with the laws while asserts that tax compliance is the provision of tax information at the proper time and ensuring returns accurately report tax liability.

Byaruhanga (2007) asserts that compliance is still low due to the fact that tax authorities have not sufficiently addressed the key shortfalls in the administration systems which include unregistered tax payers, inadequate clear tax literature, tax evaders and as well delinquent tax payers.

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Tax compliance can either be through voluntary tax compliance or involuntary tax compliance. Voluntary tax compliance involves obeying the tax laws without any state enforcement actions that leads to maximizing revenues because administration costs are low in both the economic and psychic sense. The government wastes little money and time in collecting the tax and tax payers suffer little alienation in parting with their money.

According to the neo classical economic view, people obey tax laws when it is in their interest to do so. Compliance results from the individual's rational choice aimed at maximizing individual outcome. Compliance builds an atmosphere of trust and corporation because a person feels that others are accounting in a reciprocal manner.

According to (Jackson and Million 1986), the major influences of tax compliance are; age, gender, income levels, education, income source, occupation status, sanctions, peer influence, ethics, complexity, probability of detection, tax rates and contact with tax authorities.

However, (Gilligan and Grant 2005) assert that the perception of tax fairness is one of the most important variables that can influence tax compliance behavior. Public perception that the tax system is fair and equitable is important if that system relies for its success on significant degree of voluntary tax compliance, which of course the contemporary reality for many jurisdictions.

Wadhavan and Gray (1998) state that voluntary compliance is not only promoted by the awareness of the rights and expectations but also by clear simple and user friendly administrative systems and procedures.

According to (Gilligan 1999), an analysis that takes into account the impacts of legitimacy can be helpful when examining developments in a regulatory context such as tax compliance because regulatory norms can be of local, national or international phenomena.

Noncompliance is believed to have corrosive effects on tax compliance. If compliant tax payers believe that everyone else is paying his or her fair share of the taxes, they are most likely to remain compliant. If the compliant tax payers feel like they are over paying, some will reach a point where they resent it and stop complying or comply at a lower level. The degree of compliance may breed more compliance and noncompliance breeds' noncompliance.

2.6 Tax Payer Attitudes

An attitude is an individual's characteristic way of responding to an object or situation (Graham, 1989). It is based on one's experience and leads to certain behavior or the expression of certain opinions. Attitudes are related to values, perceptions and group belonging but can be modified by environmental changes and new information.

Bird, (1989) stresses that the willingness of the tax payers to comply with their obligations depend to a large extent upon the perception that the funds taken from them are put to some good use. Similarly the seriousness with which the government enforces the revenue laws will also have profound effect on public attitudes. The extent to which government over reaches in trying to tax income may affect overall compliance (Gordon, 1990).

In more recent theoretical advances, the tax payer's behavior towards tax compliance depends entirely on his/her attitude towards risk. Tax payers can reasonably be expected to be troubled by the awareness that high income individuals and profitable corporations pay little or no tax, even if methods being used to avoid taxes are totally legal. Unless the perception that the tax system is unfair can be reversed, tax payer morale is undermined and evasion may become uncontrollable. On the other hand however, if one believes that mostly negative outcome will result from the behavior, he or she will hold a negative attitude towards it and the reverse is true.

Torgler (2003) regarded attitude as the individual's positive or negative behavior towards innovation adaptation. Attitude can be portrayed by perceptions for the usefulness of taxes, perceived ease of assessment, tax administration system and any other tax payer preference.

Tax payer's attitudes is composed of one's attribute beliefs about the object and perceived importance of having that attribute in making the decision to comply. According to the theory, reasoned action attitude is made up of the beliefs that person accumulates over his life time. Some beliefs are formed from direct experience, some are from outside information and others are inferred or self-generated.

According to (Azjen and Fishbein, 2000) attitude is an individual's salient belief about whether the outcome of his action will be positive or negative. The beliefs are rated for the probability that engaging in the behaviors will produce the believed outcomes whether positive or negative.

Azjen and fishbein (2000) believe that attitude is the degree of favorableness and un favorableness of an individual's feeling towards a psychological object. This can result into behaviors such as voluntary registering as a tax payer, making tax assessments and filling returns and finally paying taxes due to the tax authority.

Surrey (1967) on the other hand argues that voluntary compliance depends on national attitudes towards the tax system and tax administration and those national attitudes can be affected by the administration and vice versa. If the administration brings about stability and honesty in its operations, the self-respect thus achieved can form basis for respect and compliance from the tax payer.

2.6 Empirical Literature Review

Under this section, previous empirical studies on the challenges and opportunities of adopting E-tax system in ERCA and related studies in developed and developing countries like Ethiopia will be reviewed.

Empirical Review about challenges and opportunities of adopting E-tax system outside Ethiopia

A number of studies internationally have been done on the role Information Technology plays in Tax compliance. For instance a study of South Korea and Turkey on User evaluation of tax filing web sites was done by (Lee et al., 2013, to compare the design and the complexity of the web sites and the ease with taxpayers are able to file tax returns and queries on their tax status. While Turkey had a complex online system, to the contrary Turkish users did not find tax filing system difficult to use and that was attributable to the fact that they relied on accounting professionals to do their tax returns online. On the other hand, South Korean system was considered less complex but few taxpayers were using it as expected. Having in place an electronic tax filing system is one thing,

but being able to be used by taxpayers is another thing. This has influence on the current study in a way that the tax website ease of usage must be considered before such a system is rolled out to taxpayers. Other factors to be considered should also be the capacity of the system and the efficiency (Lee et al., 2013).

Electronic filing was introduced to HM Revenue and Customs (HMRC) in the United Kingdom (UK) over fifty years ago. The filing process at HMRC evolved from relying on a simple batch system in the 1960s for performing simple data processing tasks to adopting an open-source reporting technology, Extensible Business Reporting Language (XBRL), in 2010. HMRC championed the use of XBRL to standardize the processing and presentation of data in the Corporation Tax's supporting documents (accounts and computations). XBRL aims to improve the efficiency of case management, enhance the data quality, and add value to the evidence-based decision-making at HMRC. This research chronicles the evolution of HMRC's electronic filing process, which ultimately drove the agency's decision to develop Inline XBRL (the advanced version of XBRL). The UK government required all private, limited, not-for-profit and charity organizations to file their tax returns using Inline XBRL from April 2011. This case study captures and analyses HMRC's remarkable shift in perceptions and strategies towards using reporting technologies in processing information in tax filings. In addition, it contributes to the extant literature on government agencies' adoption of emerging technologies by examining HMRC's "XBRL Project." The findings showcase the essence of championing reporting technologies, continuously committing to develop them, and strategically engaging with multiple stakeholders (top government, software industry and professional accounting institutions) based on HMRC's experience with XBRL adoption process.

In Bangladesh, (Aminuzzaman, 2010) conducted a study about Public Service Delivery among Local Authorities in Bangladesh and found that some of the critical institutional challenges facing public service delivery include limited manpower and resources. The study did not focus on revenue authorities and the public service delivery they offer. (Sarshar and Moores, 2006) conducted a study in the UK and found that lack of strategic awareness, lack of capacity, poor

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performance monitoring and poor coordination processes were major challenges that hindered public service delivery.

Amitabh et al. (2009) did a study on the antecedents of paperless income tax filing by young professionals in India. The objective of this study was to study how young Indian professionals will adopt or behave towards paperless or online filing of tax returns with the aim of enhancing compliance. The regression analysis carried out found that the antecedents of young Indian professionals depended on the perceived ease of the tax system, personal innovativeness in information technology, relative advantage, performance of filing service, and compatibility. The implication of the findings to the current study is that for any online system to succeed whether for small, medium or large taxpayers' category there must be the ease of use, innovativeness and accessibility.

In Malaysia, (Ling and Nawawi 2010) carried out a survey on Integrating ICT Skills and tax software in tax education. The respondents were the tax practitioners and the study aimed at establishing the necessary skills required by taxpayers to fully utilize a tax online system. The study found that three skills are needed by a taxpayer to interact well with technology based tax system namely, spread sheet software, word-processing software and e-mail. The findings of this study has got implications on the current study in that in analyzing the effectiveness of electronic filing system, one must not ignore the mandatory skills that would be users of the system need to have. Failure to consider such skills may make the intention of the system not to be realized as confirmed by (Maede, 2002). He confirmed that despite the heavy investment that the Malaysian tax authority put in new online system, only 20% of the targeted taxpayers were able to use it after three years of implementation. This was mainly attributed to lack of necessary user skills like computer literacy; however, taxpayer's behavior also played a role.

In Kenya, especially in Kenya Revenue Authority, different studies have been done on the subject of technology and tax compliance with specific reference to tax filing (Muita and Makanga, 2010). Makanga (2010) did a study on the adoption of technology as a strategic tool for enhancing tax compliance in Kenya. The case study was based on Large Taxpayers which included companies with a turn over Kshs. 750 million and above, or government ministries and corporations. The

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objective of the study was to evaluate the role Technology would play in Kenya to enhance tax compliance among large taxpayers. The study found that in the fast changing business world, technology has become part and parcel of any business growth. Either KRA or Large Taxpayers must embrace modern technology to enhance efficiency in tax compliance.

Muita (2010) did a related study on the factors that influence adoption and use of e-filing system among Large Taxpayers in Kenya. The study examined the skills required by the users of e-filing, the technology required and the tax authority's preparedness in enhancing the adoption of tax compliance based technology. The study found that for e-filing to effectively take off in Kenya skills, infrastructure and a conducive business environment are needed.

Akinyi (2010) looked at the challenges Government institutions face on public service delivery in Kenya. She found that there is a problem of lack of coordination between local authorities and extension service delivery workers of the government at the field level.

Empirical Review about challenges and opportunities of adopting E-tax system in ERCA.

According to (Samuel, 2015) The economic imperative of ICT on public agencies is becoming paramount. Accordingly, ERCA has been automating its tax assessment and collection systems, which it claims assist to achieve increase in its tax revenue. This increase, however, is reported to be low compared to the tax base of the economy. Other studies have also revealed high administrative burden for paying taxes and noncompliance to tax laws that result for the country to lose millions of income from tax revenue.

The study aimed to examine how well e-Government is recognized and comprehensively rolled out as a strategic tool to solve such drawbacks on existing tax administration systems at ERCA LTO. ERCA has been investing to reform its tax administration system. However, the changes made are not harmonized with the national e-Government plan, focusing only to reach around 1,000 large tax payers (than its potential capacity to expand the tax base), not striving towards bringing holistic e Government, and is mostly piecemeal. The overall level of satisfaction of large taxpayers on ERCA's website as a primary source of one-stop-shopping portal is also found to be only 52%. In terms of the stage of e-Government, ERCA is found at its

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emerging stage where most of its e Services are informational (static) than transactional. Benchmarking of its e-Services with selected Sub-Saharan African countries has also revealed that a lot has to be done for ERCA to evolve its eService to a stage where all its services are integrated in seamless manner; fiscal transparency is enhanced; knowledge management (for example to control tax evasion) is optimized; and e Payment augments e-Filing. To address these findings, the study recommends a more robust transformational change, than mere automating of existing process, towards the higher stages of e Government directed by a comprehensive e-Government strategic plan.

Natnael, (2015) Modern tax administrations proactively facilitate compliance by simplifying processes, providing information, education, and support to taxpayers, and directing their limited compliance monitoring and enforcement resources to the areas of greatest risk to revenues. Efficiency of tax administration is defined as costs, tax clearance time and effectiveness of revenue collection.

However, the systems are tied with challenges because of lack of awareness creation from the side of authority, incapacity of supplier for the sales register machines, lack of awareness in implementing tax automations from the side of the taxpayers.

The objective of this study is to assess the challenges faced by both taxpayers and tax administration in implementing the tax automation by investigating the performance of tax collection and tax assessment by use of information technology systems of sales register machines, E-taxing, by use of purchase declaration system and SIGTAS in the large tax payer office of ERCA .

Mixed methods of both qualitative and quantitative approach are applied in that the relevant data required for the study are collected through questionnaires and focus group interviews. Samples are selected by use of random sampling technique.

From the response obtained, the participants of the information systems encountered problems by each of them are identified. The major findings of the study are lack of coordination among participants ,lack of knowledge and commitment to deliver satisfactory service ,lack of infrastructure , delay in service delivery of maintenance of sales register machines , knowledge

gap exists on suppliers of machines, the users of systems and tax officers , and lack of awareness creation by tax authority. From this, it is concluded that to solve the problems encounter the participants of the systems need of coordination among the participants, it needs continues education and training and awareness creation by tax office are essential for success of the systems. In this study, the participants of the systems provide their respective responses for the challenges they are facing. Based on the findings, the necessary recommendation for the implementation of tax automations by the tax authority are the tax authority and tax office must conduct self-examination and fill their gap, should change their approach of awareness creation, the tax office should set up incentive mechanisms to bring them in to the systems, there should be active cooperation and participation among the participants are the basic ingredients to realize good tax administration, and the attitudes of all the participants (include taxpayers, Suppliers of sales register machines and Staffs of Tax office) are required to change.

Ruta, (2017) the study focused on assessing E-tax filing system in selected branch offices of Ethiopian Revenues and customs Authority (ERCA). To achieve this objective, a review of relevant literature was done and primary data were gathered using a Likert scale questionnaire format. Data analysis was carried out using descriptive analysis. Findings revealed challenges like taxpayer's attitude, taxpayers fault and governmental problems and benefits which include data handling, accuracy, job performance and tax compliance. In addition, the study found out that E-tax filing system and tax compliance has a positive relationship. The study recommended the organization to improve internet connection by collaborating with Ethio-telecom as well as to create awareness about the system and provide electronically payment system.

2.7 Research Gap

Most of the studies discussed above shows that there exist challenges and benefits of electronic tax system. However, most of these studies were conducted outside of Ethiopia.

In Kenya, especially in Kenya Revenue Authority, different studies have been done on the subject of technology and tax compliance with specific reference to tax filing. Makanga (2010) did a study on the adoption of technology as a strategic tool for enhancing tax compliance in Kenya. Muita (2010) in her MBA thesis has also done a related study on the factors that influence adoption and

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use of e-tax filing system among Large Taxpayers in Kenya. The study examined the skills required by the users of e-tax filing, the technology required and the tax authority's preparedness in enhancing the adoption of tax compliance based technology. The study found that for e-tax filing to effectively take off in Kenya skills, infrastructure and a conducive business environment are needed.

As per knowledge of the researcher, In Ethiopia's context, electronic tax filing system has been addressed by few studies such as Practice, Challenges, and Prospects of e-Government; the case of ERCA (Samuel, 2015), Information technology and fiscal capacity in a developing country: evidence from Ethiopia (Merima et al., 2014) and Factors Influencing taxpayers' compliance with the tax system: An empirical study in Mekelle City, Ethiopia (Tadesse et al., 2014). Most of the studies carried out discussed taxpayer's perception instead of the tax authority. Therefore, this study is motivated because of the absence of studies in the area of benefit and challenges of e-tax filing system in Ethiopian Revenues and Customs Authority (ERCA) and seeks to fill the gape.

CHAPTER THREE

3. RESEARCH METHEDODOLOGY

This chapter involves the research design and method employed. In this part, research approach and design, research method, research instrument, sampling design, data type and measurement scale, variables of the study, method of data analysis and reliability and validity instruments are presented.

3.1. Research Approach and Design

The research has followed quantitative approach, A quantitative approach is one in which the researcher primarily uses postpositive claims for developing knowledge (i.e., cause and effect thinking, variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data. (Creswell, 1999).

The purpose of this study is to describe opportunities and challenges of Adopting E-TAX system in Ethiopia since 2009 and trace areas of weaknesses and strengths towards the implementation of the system. As can be seen from the research problem it is more of descriptive type and tries to assess and justify current practice and specific factors that affecting its intended implementation. The study is a descriptive type of research used primary. The reason for opting such type is due to simplicity and the nature of the topic selected.

According to Burns and Grove (2003), descriptive research is designed to provide a picture of a situation as it naturally happens. It may be used to justify current practice and make judgment and also to develop theories.

3.2 Method of Data Collection

Leedy and Ormond (2005) state that survey research involves acquiring information about one or more group of people perhaps about their characteristics, opinions, attitudes, or previous experiences by asking them questions and tabulating their answers. Creswell (2009) also states that the purpose of survey research is to generalize from the sample to the population in order to

be able to make inferences about some characteristic, attitude or behavior of the population. Survey design is selected for this research because of budget and time constraint (economical advantage of the design).

The survey method was conducted using a structured questionnaire for ERCA employees. Review of records and various documents of published and unpublished of ERCA were used. The questionnaire was prepared in English language for ERCA employee. The first part of the questionnaires were designed to collect participants' profile (background information), whereas, the second part of the questionnaire were focused on E-TAX related issues that addresses the research questions.

3.3. Population and Sampling Design

3.3.1. Target Population

Target population is defined as the entire group a researcher is interested in. According to (zikmund,2003) the definition of population was an identifiable total set of elements of interest being investigated by a researcher. The target populations for the study were ERCA LTO customer service process, Tax Audit Process and Performance and Implementation of the Tax Administration and Implementation Process departments.

3.3.2. Sampling Method

According to Douglas et al (2006), a sample is a tool to infer something about a population or sample is a portion or part of the population of interest. The reasons to sample when studying characteristics of a population, there are many practical reasons why I prefer to select portions or samples of a population to observe and measure. Some of the reasons for sampling are: the time to contact the whole population may be prohibitive, the cost of studying all the items in a population may be prohibitive, and the physical impossibility of checking all items in the population, the destructive nature of some tests and the sample results are adequate. Even if funds are available, it is doubtful the additional accuracy of a 100 percent sample-that is, studying the entire population. When selecting a sample, researchers or analysts must be very careful that the sample is a fair representation of the population.

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The type of sampling used for this researcher is purposive sampling technique. It is because to focus on particular characteristics of a population that are of interest, which enable me to answer my research questions.

3.3.3. Sample Size Determination

Sampling refers to the statistical process of selecting and studying the characteristics of a relatively small number of items from a relatively large population of such items, to draw statistically valid inferences about the characteristics of the entire population. Prior to the actual data collection, emphasis was made on the determination of sample size that is mainly dependent on the purpose of the study, available resource and precision (variance) required.

Sampling is the gathering and asking of a range of individuals the same questions related to the benefits of using electronic online filing system to firm, over manual alternatives. It also involves the collection of relevant information (O Leary, 2004).

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size,

N is the population size, and

e is the level of precision

Table 1: Sample Size for $\pm 5\%$ Precision Levels where Confidence Level is 95% and $P=0.05$

Stratum	Size of Population(N)	Sample size(n)
Employees ERCA	233	147

Source: Leary formula

3.5. Method of Data Analysis

The statistical analysis is conducted based on Percentages, Tables and Figures. In case of descriptive statistics, a quantitative method of data analysis is adopted. The data collected from

survey questionnaires were carefully coded and checked for. Descriptive statistics was employed to analyze data and the results were tested with non-parametric tests of significance.

3.6. Measurement of Reliability and Validity

The study validated the measurements using reliability and Validity.

3.6.1. Validity

According to (Leedy et al, 2005), validity is the ability of an instrument used to measure what it is designed to measure. They further explained two basic questions: does the study have sufficient control to ensure that the conclusions the researcher draw are truly warranted by the data and can the researcher use what he/she has observed in the research situation to make generalization to the population beyond that specific situation? The answers to these two questions address the issues of the content validity, internal validity and external validity.

Internal Validity

The easy way to describe internal validity is the confidence that one can place in the cause and effect relationship in a study to check whether there could be an alternative cause, or causes, that explain the observations and results or not. Though the dependent variables have other wide ranges of factors as independent variables, the researcher maximize the internal validity by focusing on individual's perception which were not examined in the previous studies and set up strong controls to isolate other factors by asking open ended questions to get the major extraneous variables and control their effect on the independent variable.

External Validity

External validity is the generalizability of the research, that is, ability of its conclusion to be validly extended from the specific environment in which the research study is conducted to similar “real world” situations. Externally valid research with generalizable conclusions is obviously more valuable than externally invalid research, whose conclusions are restricted to specific research settings in a given study.

3.6.2. Reliability

Cronbach's alpha measured how well the set of statements measured the constructs. Cronbach's alpha determines reliability. Reliability comes to the forefront when variables developed from summated scales are used as predictor components in objective models. As shown in the table below see (table 3.2), each items (questions) under the study shows a good and acceptable reliability. Therefore, the result indicated that the questionnaire of the study was internally consistent by 70.9 percent.

Table 3.2: Cronbach 's Alpha Results.

Test scale = mean(unstandardized items)

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
electronic~m	127	+	0.3032	0.2034	.0969188	0.7042
lowtransac~t	127	+	0.3846	0.2958	.0946526	0.6976
reducedpap~k	127	+	0.4334	0.3391	.0924921	0.6937
convenience	127	+	0.3598	0.2373	.0940847	0.7020
overcomege~s	127	+	0.3834	0.2757	.0936842	0.6984
improvecus~e	127	+	0.5547	0.4370	.0846583	0.6809
improvingt~s	127	+	0.1188	-0.0349	.1049394	0.7317
createbett~c	127	+	0.4591	0.3252	.0889165	0.6934
timelyinfo~y	127	+	0.5875	0.4951	.0854276	0.6778
comprehens~l	127	+	0.6458	0.5582	.082493	0.6705
increasere~r	127	+	0.4671	0.3691	.0908238	0.6906
highcostof~u	127	-	0.1024	-0.0288	.1044592	0.7260
lackofadeq~a	127	+	0.3617	0.2578	.094691	0.7000
lackofcapa~o	127	+	0.4334	0.3391	.0924921	0.6937
lackofsupp~l	127	+	0.3501	0.2324	.0946366	0.7023
lackofintr~n	127	+	0.3834	0.2757	.0936842	0.6984
limitation~r	127	+	0.5529	0.4340	.0846572	0.6811
limitation~e	127	-	0.1711	0.0329	.1019284	0.7219
frequentpo~n	127	+	0.4339	0.3087	.0906148	0.6951
softwareap~n	127	+	0.4090	0.3124	.0932829	0.6958
Test scale					.0929769	0.7091

CHAPTER FOUR

4. RESULTS AND DISCUSSIONS

4.1 Introduction

Data collected through Questioner were analyzed in this chapter. In the analysis, a total of One Hundred Forty Seven (147) questionnaires were distributed purposely to sampled respondents. Out of the One Hundred Forty Seven (147) questionnaires distributed to ERCA staffs one Hundred twenty Seven (127) which is 86% were successfully completed returned and used for the study. Besides, other documents regarding to E-Tax technology were reviewed. In order to analyze the research results. Descriptive measures of each questions response from the ERCA staffs were presented in the following sections.

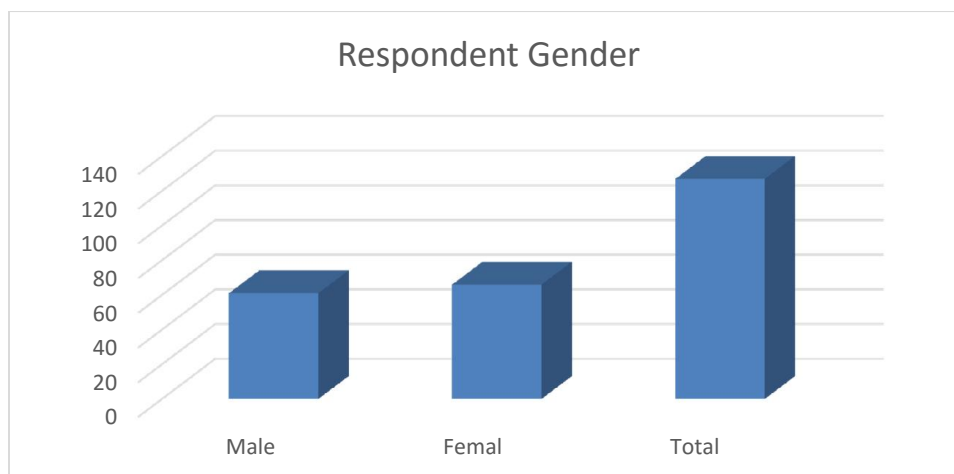
4.2 Background information of Respondents

It includes gender of the respondents and Educational Background.

4.2.1. Gender

Out of 127 respondents of ERCA staffs 52 percent of the respondents were female's staffs and 48 percent of the staffs were male. These indicate that the sex ratio of the staffs were almost equal and also it indicates that the authority is providing a good opportunity for female staffs.

Figure 4.1 Genders of Respondents

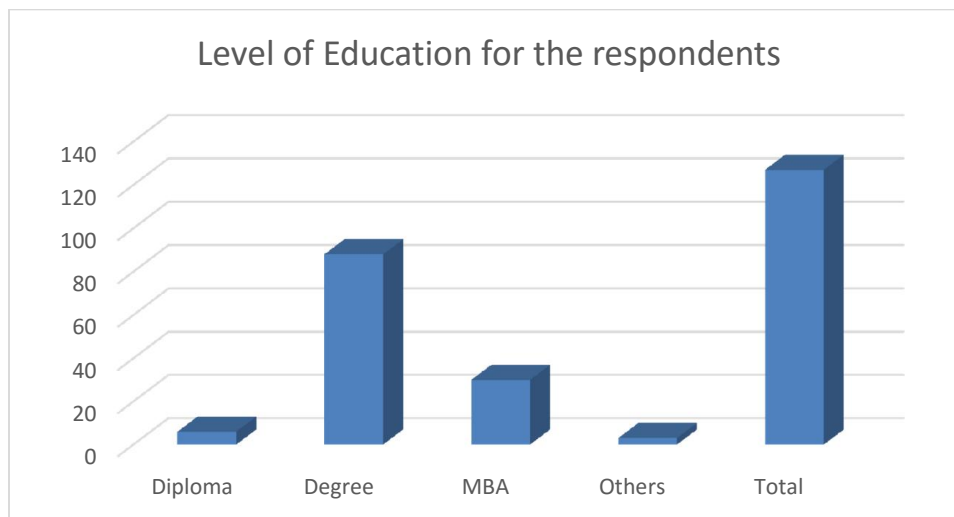


Source: Owen survey, 2018

4.2.2. Educational Back ground of the respondents

Regarding educational level 5 percent (6) of the respondents of ERCA were diploma holder, 78 percent (99) of the ERCA Staff respondents were BA degree holder, and 15 percent (19) of the respondents of ERCA staffs were MBA holder and 2 percent (3) of ERCA Staff were other educational level such us certificate or more than MBA. These implies that 93 percent of the respondents were degree and MBA holders these indicates the user of E-tax software have enough knowledge to operate the system.

Figure 4.2 Level of Education for the respondents



Source: Owen survey, 2018

4.3 Opportunities for Adoption and Development of E-Tax Technology in Ethiopia

It includes the general advantages of E-Tax system implementation as compared to the old or manual system

4.3.1 Opportunity from ERCA Staffs

The opportunities of using E-Tax system is addressed generally in three questions and the responds of the staffs were analyzed as follows

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The first question about the opportunities of adopting E-Tax system in Ethiopian for the staffs of the authority were “Do you have adequate knowledge on E-Tax system” all the respondent were answer yes. This indicates that all of the Staffs of ERCA have the knowledge of E-Tax System.

Table 4.1 Opportunities of E tax

No.	Description	Yes	No	Total
1	Do you have adequate knowledge on E-Tax system	127		127
Total		127		127

Source: Owen survey, 2018

The second question is about main opportunity of the E-tax system for your organization and the response of the staffs were 54 percent of the respondents says the E-Tax system increases the authority ability scales up, 61 percent of the respondents says the E-Tax system increase the transparency and traceability of the authority performance, 23 percent of the respondents of the ERCA staffs responses were the E-Tax system reduces the cost of the authority and lastly 10 % of the respondents says the tax system were eliminate the errors notices. According to the responses of the respondents the E-Tax system increases the traceability and transparency of the tax report by the tax payers in both direction, it increase the performance of the authority by scaling up its ability to serve the customer and also it minimizes the cost of operation for the authority. In these questions the respondents give more than one answers.

The last question of the opportunities of the E-tax system were “What is the benefit of implementing e-tax system for the country in general?” the respondents were 26 percent agreed on the increase transparence and decrease waste on the error reports of the tax payer financial statement 11 percent of the respondents were agreed on the recode keeping of reporting file securities decrease by using E-Tax system. 73 percent of the respondents were agreed on improving the tax accessibility for tax payer. Most of the respondent were agreed on adopting of E-tax system catalyze development for new and innovative tax systems. The result indicates the E- Tax System will increase the tax transparence, improve the access to taxation service and catalyzes the development of new tax system for the country. In these questions the respondents give more than one answers.

4.4 Benefits Realized from the Adoption of E-Tax System in Ethiopia

Perceived benefits are the gains or improvements derived from existing traditional ways of administrating tax to the using of E-Tax System. The following section summarizes respondents' views of expectations and perceived benefits for E-Tax System.

Some of these benefits include facilitate development of new tax system and improvement productivity, cost saving, increased tax payers satisfaction, speed and efficiency of the tax payment service, improvement the amount of tax collection, reduces tax payers compliance and others. A total of 11 questions on “Benefits” of adopting E-tax were asked to indicate the extent to which each respondent agrees to corresponding closed ended statements rated on a five-point Likert type scales ranging from ‘1’ “Strongly Disagree” to ‘5’ “Strongly Agree”. Statistical results on the variables under the benefits of E-Tax including the number of frequencies, the Mean and Standard Deviation of the data points. The mean and standard deviation tried to tell the averages where the data points fall for each specific variable while the standard deviation column showed the variability of the data points for each variable under consideration.

The following section summarizes respondents' views of expectations and perceived benefits for E- Tax adoption. For analysis purpose perceived benefits are classified in to operational efficiency and service benefits (Futcher , 2003)

Table 4.2 Benefits E- tax

No.	Assessment Area	MEAN	SD
1	Electronic tax filing system is fast & makes work simple compared to the manual system	4.57	0.76
2	Low transaction cost	3.78	0.71
3	Reduced paper work	4.38	0.79
4	Convenience	4.35	0.96
5	Overcome geographical limitations	4.20	0.86
6	Improve customer service	4.06	1.09

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7	Improving transaction speeds	4.10	1.11
8	Create better relationship among ERCA and Clients	3.78	1.11
9	Timely information on returns and payments	4.37	0.92
10	Comprehensive to handle all my tax filing requirement by government (income tax, VAT, withholding tax, stamp duty, etc.)	4.36	0.96
11	Increase reliability and reducing errors	4.34	0.84

Source: Owen survey, 2018

The potential benefits of E-tax system as perceived by the ERCA staffs were identified in this study as captured in the above table 4.2. The respondents strongly agreed that adoption of E-Tax System in Ethiopia Reduced paper work, Overcome geographical limitations; Low transaction cost and makes work simple and fast as compared to the manual system. This is evidenced by the data collected from the respondents with mean score of 4.38, 4.20, 3.78 and 4.57 respectively and standard deviation 0.79, 0.86, 0.71& 0.76.

The research further revealed that the respondents were agreed by the E- Tax System to Increase reliability and reducing errors had 4.34 scored mean and standard deviation 0.84, by Comprehensiveness of the system to handle all tax filing requirement by government (income tax, VAT, withholding tax, stamp duty, etc.) had mean scored 4.36 and standard deviation 0.96, by facilitating Timely information on returns and payments of tax had mean score 4.37 and standard deviation 0.96, by Creating better relationship among ERCA and Clients had mean score 3.78 and standard deviation 1.11 by Improving customer service had mean score 4.06 and standard deviation 1.09, and lastly by Improving transaction speeds had mean score 3.78 and standard deviation 1.11.

The result indicates that the E-Tax system creates the work of the tax administration and tax report simple and reduces the work paper by online filling and registering the data. The System also

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reduces the cost of transaction by reducing the preparation of tax report to the tax payer and makes the tax payment process short as compared to the old manual system.

According to the respondent response the E-Tax system have the following benefits in advance to the manual system. The main benefit was the taxpayer had the summery of all tax payment report in one system which includes payroll tax, VAT, withholding tax, cost sharing, withholding tax, pension contribution etc.

4.5 Challenges from the Adoption of E-Tax System in Ethiopia

As cited in chapter two, there are so money challenges that negatively affect adoption and growth of the E-Tax payment. The factors affecting the successful adoption and growth of new technologies, such as E-Tax are common in nature. Such as cost factors, security and trust factors and lack of adequate ICT infrastructure (particularly in developing countries like Ethiopia). However, reasons vary widely among countries and also important to note that challenges to E-Tax technology adoption and development work differently according to organizational culture.

A total of 13 questions on challenges of adopting and extending of E-Tax obtained from different literatures were asked to indicate the extent to which each respondent agrees to corresponding closed ended statements rated on a five-point Likert type scales ranging from '1' "Strongly Disagree" to '5' "Strongly Agree". Statistical results are presented under each section of the factors considered using the table including the number of frequencies, the Mean and SD of the data points. The mean tried to tell the average where the data points fall for each specific variable. Accordingly, the researcher tried to interpret the Mean and the SD of the data points.

Table 4.3 Challenges of e tax

No.	Assessment Area	MEAN	SD
1	High cost of implementation of E-Tax. (such as cost of ICT equipment and network, software and reorganization	3.06	0.95

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2	Lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-tax context	4.39	0.82
3	Lack of capability to integrate with other systems, such as cash register machine	4.38	0.78
4	Lack of supported with e-payment supplementary system	4.45	0.91
5	Lack of Intranet connection	4.20	0.86
6	Limitation in network infrastructure and internet related support services	4.10	1.09
7	Limitation in ICT infrastructure	3.64	1.00
8	Frequent power disruption;	3.77	1.02
9	Software/application is easy to use and/or to training new users	4.07	0.78
10	I do not get any problem with using the electronic tax filing system	4.16	0.91
11	ERCA offered adequate training about the system	3.28	1.20
12	ERCA is providing me close and fast technical support for effective functioning of the system	2.49	0.75
13	The education and awareness creation program through Television, brochures, magazines, newspapers and others is not Sufficient to improve compliance.	3.53	1.24

Source: Owen survey, 2018

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Tables 4.3 shows that the cost of implementing of E-tax system such as cost of ICT equipment and network, software and re-organization is the challenge for implementation and growth of E-Tax System in Ethiopia, in which the mean score and standard deviation were found 3.06 and 0.95 respectively. The respondent also strongly agreed that Lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-tax context, Lack of capability to integrate with other systems, such as cash register machine, Lack of supported with e-payment supplementary system, Lack of Intranet connection considered as a factor that negatively affecting the successful adoption and growth of E-tax System as the average result in the Likert scale is found 4.39, 4.38, 4.45 and 4.20 respectively and the standard deviation of 0.82, 0.78, 0.91 and 0.86 respectively.

The main limitations of E-tax system as perceived by the Large Tax Payers and ERCA staffs were Limitation in network infrastructure, internet related support services, Limitation in ICT infrastructure and frequent power disruption. This is evidenced by the data collected from the respondents with mean score ranging from 3.63 to 4.10 and the standard deviation from 1.00 to 1.09.

Concerning the application program of the authority for proper adoption of the E-Tax System for were asked for the ERCA staffs and the respondents were agreed that Software/application is easy to use and/or to training new users with the mean score of 4.07 and standard deviation 0.78, about the problem with using the electronic tax filing system the respondents were agreed that they have a problem with the application of the system with a mean score of 4.07 and standard deviation 0.91.

Furthermore the respondent are asked about the support of the ERCA about offering adequate training about the system, providing of fast technical support for effective functioning of the system, and education and awareness creation program through Television, brochures, magazines, newspapers and others the respondents were disagree about the training, technical support and education and awareness with a mean of 3.28, 2.49 and 3.53 respectively and their standard deviation 1.20, 0.75 & 1.224 respectively.

The respondent result indicates that the system is not too much difficult for implementation but the authority did not provide training and technical support about the E-Tax System and the staffs and the Large Tax payers did get a problem on the system.

4.6 The Driving Force from the Adoption of E-Tax System in Ethiopia

A total number of 6 questions on “driving forces” for adoption and extension of E-Tax System in Ethiopia to indicate the extent to which each respondent agrees to corresponding closed ended statements rated on a five-point Likert type scales ranging from ‘1’ “Strongly Disagree” to ‘5’ “Strongly Agree”. The summary of the results for all statements or variables under the research study and the result with respect to each statement is indicated below. Accordingly, the researcher tried to interpret the Mean and standard deviation values.

Table 4.4 Driving force to Start E Tax

No.	Assessment Area	MEAN	SD
1	Desire to improve the relationship with customers	4.30	0.92
2	Desire to build organizational reputation	3.87	0.67
3	Desire to satisfy rapid change of customer needs and preferences	4.45	0.82
4	Desire to improve organizational performance and productivity;	4.48	0.84
5	Desire to simply assess and control tax payer data	4.36	0.87
6	Desire to keep tax payer information safely	3.97	0.98

Source: Owen survey, 2018

There are factors influencing adoption of E-tax System As depicted in the above Table 4.7 indicated that most respondents strongly agreed that Desire to improve the relationship with

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customers, Desire to build organizational reputation, Desire to build organizational reputation, Desire to satisfy rapid change of customer needs and preferences, Desire to improve organizational performance and productivity, Desire to simply assess and control tax payer data and Desire to keep tax payer information safely were the main influencing factors for adoption of E-Tax System, in which mean score are founded from 3.87 to 4.30 and from standard deviation 0.64 to 0.92.

CHAPTER FIVE

5. Summary of Findings, Conclusions and Recommendations

This chapter present summary of the findings and conclusion in section 5.1 and 5.2, respectively. Afterwards, the possible important recommendation and suggestion for further research methods presented in section 5.3, respectively.

5.1 Summary of Findings

The objective of the study was to identify opportunities, challenges, benefits, and driving forces for adoption of E-Tax System in Ethiopia. Accordingly, this part of the research summarizes the major findings of the study from the challenge and prospect perspectives. Despite the numerous benefits that E-Tax System brings to the nation, it also has its own challenges. Cost of implementation of E-Tax System such as cost of ICT equipment and network, software and re-organization, lack of customer awareness with E-Tax system, lack of technical support and training from the authority, frequent interruption of power and lack of sustainable internet assess are the main challenges of adoption and growth of E-Tax system in Ethiopia.

5.2 Conclusion

The findings of the study revealed that adoption and development of E-Tax technology in Ethiopian Revenue and customs Authority stretches wide across the two extremes of the challenges and prospects where the concerted effort by stakeholders to overcome the challenges will bring about immense opportunities to the dominant players in the field with the ultimate result of transforming the country towards financial inclusion.

Accordingly, a number of conclusions can be drawn from these results.

Potential operational efficiency benefits of E-Tax adoption and development as perceived by the Ethiopian Revenue and customs Authority are: increase productivity, reduces paper work, reduce transaction cost, increase the volume of tax payers and generate better revenue collection, comprehensive to handle all tax filling required by the government, increase reliability and reducing errors. Moreover, the Authority realized service benefits like, facilitate development of

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new system, , improve customer service, increase accessibility of tax payer services, improving transaction speed, create good relation among tax payers and perceiving both operational and services benefits have positive tendency to adopt and develop E-Tax technology.

Despite the above benefits of adopting and developing E-Tax technology in Ethiopian, it is associated with some challenges. The study shows that lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-tax context, lack of capability to integrate other system, limitation in network infrastructure and internet related support services, low levels of computer literacy, frequent power disruption are considered the basic external challenges facing the implementation of E-Tax system.

Therefore, from the above discussion it is possible to conclude that E-Tax technology is well adopted and developed in Ethiopian Revenue and Customs Authority considering adoption and development of E-Tax technology in the rest of the world, E-Tax technology is still in its infancy stage in Ethiopia.

The driving forces that initiate the Ethiopian Revenue and Customs Authority for adoption and development of E-Tax technology are Desire to improve the relationship with customers, Desire to build organizational reputation, Desire to satisfy rapid change of customer needs and preferences, Desire to improve organizational performance and productivity, Desire to simply assess and control tax payer data, Desire to keep tax payer information safely. In addition increasing revenue collection and to cover country expenditure.

5.3 Recommendations

Based on the findings the researcher came up with the following possible Recommendations to the Authority, the large tax payers, and the government in order to overcome the challenges, exploit the untapped opportunities in adoption of E- Tax system and to ensure a successful practice of E-Tax System in Ethiopian Revenues and Customs Authority.

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- ✚ The Authority should create deep awareness to large tax payers concerning the E-tax system and the benefits associated with using E-Tax System through advertising internet, mass media as well as through organizing public exhibition and talk shows. Besides, the Authority should attract the large tax payers to use the technology by diverse incentive.
- ✚ The Authority should facilitated proper and continuous training courses to its employees and to large tax payers until they have adequate understanding of the E-Tax system so as to achieve the desired objectives;
- ✚ ERCA should at the onset upgrade e-tax server to calm down the pressure on the current servers.
- ✚ ERCA should work together with other concerned bodies such as ethio-telecom, Ethiopian electric utility and so on to solve the challenges that hinders e-tax system.
- ✚ ERCA should install user friendly features on the filing web-sites as to increase the tax payers' interest of use of the system.
- ✚ ERCA should continue educating tax payers and officers to upgrade their know-how on the use of the system.

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APPENDIX -1. Questioner

St. Mary University

School of Graduate Studies

Department of Accounting and Finance

A questionnaire to be filled by Ethiopian Revenue and Customs Authority Staff

Dear Respondents,

This study is entitled “**Challenges and Opportunities of Adopting E-TAX System in ERCA**” and conducted in partial fulfilment of the requirements for the Master’s Degree in Accounting & Finance at St. Mary University. Its main objective is to access the opportunities and challenges of adapting the T-Tax system by the authority. The research is going to be carried out on your responses and other relevant data that could support it.

The purpose of this questionnaire is to obtain your opinion about the general implementation of the E-Tax system and views regarding the difficulties and the advantages to adapt the E-Tax system. Hence, the information you will give enable me to critically analyze the opportunities and challenges of the E-Tax system.

Your cooperation to respond is very important to this study because it represents a number of others who are not included in the sample. The information provided is purely for academic purpose and I would promise that all information you provide would be strictly confidential. In order to accomplish this study, you are kindly request to answer every question; your kind cooperation is highly appreciated.

I thank you very much in advance for your cooperation

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E-mail: tdagne8@gmail.com

A. BACKGROUND INFORMATION.

1. Sex

a. Male

b. Female

2. Level of Education (please tick what applies to you)

A. Diploma

B. Degree

C. Masters

D. Other(specify).....

B. E-TAX OPPORTUNITIES

3. Do you have adequate knowledge on e-tax system?

A. Yes

B. No

4. What is the main opportunity of e-tax system for your organization?

A. Ability to scale up

B. Increase transparency and traceability

C. Cost reduction

D. Eliminates error notices

E. Specify if other.....

5. What is the benefit of implementing e-tax system for the country in general?

A. Increase transparency and decrease leakage and waste

B. Reduced security

C. Improve access to taxation services

D. Catalyze development for new and innovative tax systems

E. Specify if others.....

Challenges and opportunities of adopting E-Tax system in the case of ERCA

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

6. What is the main benefit of E-tax system for tax payers?

1-Strongly Disagree	2-Disagree	3- Neutral	4- Agree	5-Strongly Agree
----------------------------	-------------------	-------------------	-----------------	-------------------------

Assessment Area	1	2	3	4	5
Electronic tax filing system is fast & makes work simple compared to the manual system					
Low transaction cost					
Reduced paper work					
Convenience					
Overcome geographical limitations					
Improve customer service					
Improving transaction speeds					
Create better relationship among ERCA and Clients					
Timely information on returns and payments					
Comprehensive to handle all my tax filing requirement by government (income tax, VAT, withholding tax, stamp duty, etc.)					
Increase reliability and reducing errors					

7. What are the main challenges of E-tax system for tax payers?

1-Strongly Disagree	2-Disagree	3- Neutral	4- Agree	5-Strongly Agree
----------------------------	-------------------	-------------------	-----------------	-------------------------

Challenges and opportunities of adopting E-Tax system in the case of ERCA

Assessment Area	1	2	3	4	5
High cost of implementation of E-Tax. (such as cost of ICT equipment and network, software and reorganization)					
Lack of adequate coordination, interaction and cooperation between banks and other decision making centers in E-tax context					
Lack of capability to integrate with other systems, such as cash register machine					
Lack of supported with e-payment supplementary system					
Lack of Intranet connection					
Limitation in network infrastructure and internet related support services					
Limitation in ICT infrastructure					
Frequent power disruption;					
Software/application is easy to use and/or to training new users					
I do not get any problem with using the electronic tax filing system					
ERCA offered adequate training about the system					
ERCA is providing me close and fast technical support for effective functioning of the system					

Challenges and opportunities of adopting E-Tax system in the case of ERCA

The education and awareness creation program through Television, brochures, magazines, newspapers and others is not Sufficient to improve compliance.					
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8. What is the main driving force to adapt E-tax system for tax payers?

1-Strongly Disagree	2-Disagree	3- Neutral	4- Agree	5-Strongly Agree
---------------------	------------	------------	----------	------------------

Assessment Area	1	2	3	4	5
Desire to improve the relationship with customers					
Desire to build organizational reputation					
Desire to satisfy rapid change of customer needs and preferences					
Desire to improve organizational performance and productivity;					
Desire to simply assess and control tax payer data					
Desire to keep tax payer information safely					

APPENDIX -2. Stata 12 Results

Benefits Realized from the Adoption of E-Tax System in Ethiopia

Challenges and opportunities of adopting E-Tax system in the case of ERCA

Notes:

```
1. (/v# option or -set maxvar-) 5000 maximum variables
```

```
. *(12 variables, 127 observations pasted into data editor)
```

```
. tabstat electronictaxfilingsystem, stats(mean sd)
```

variable	mean	sd
electronic-m	4.566929	.7621039

```
. tabstat lowtransactioncost, stats(mean sd)
```

variable	mean	sd
lowtransac-t	3.771654	.714798

```
. tabstat reducedpaperwork, stats(mean sd)
```

variable	mean	sd
reducedpap-k	4.377953	.7860806

```
. tabstat convenience, stats(mean sd)
```

variable	mean	sd
convenience	4.354331	.9555814

```
. tabstat overcomegeographicallimitations, stats(mean sd)
```

variable	mean	sd
overcomege-s	4.204724	.8576322

```
. tabstat improvecustomerservice, stats(mean sd)
```

variable	mean	sd
improvecus-e	4.062992	1.089255

```
. tabstat improvingtransactionspeeds, stats(mean sd)
```

variable	mean	sd
improvingt-s	4.102362	1.111517

```
. tabstat createbetterrelationshipamongerc, stats(mean sd)
```

variable	mean	sd
createbett-c	3.779528	1.112079

```
. tabstat timelyinformationonreturnsandpay, stats(mean sd)
```

variable	mean	sd
timelyinfo-y	4.370079	.9155027

```
. tabstat comprehensivetohandleallmytaxfil, stats(mean sd)
```

variable	mean	sd
comprehens-l	4.362205	.9567578

```
. tabstat increasereliabilityandreducinger, stats(mean sd)
```

variable	mean	sd
increasere-r	4.346457	.8392925

```
.
```

Challenges from the Adoption of E-Tax System in Ethiopia

Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables

. *(13 variables, 127 observations pasted into data editor)

. tabstat highcostofimplementationofetaxsu, stats(mean sd)

variable	mean	sd
highcostof-u	3.062992	.949085

. tabstat lackofadequatecoordinationintera, stats(mean sd)

variable	mean	sd
lackofadeq-a	4.393701	.8180259

. tabstat lackofcapabilitytointegratewitho, stats(mean sd)

variable	mean	sd
lackofcapa-o	4.377953	.7860806

. tabstat llackofsupportedwiththepaymentsupp, stats(mean sd)

variable llackofsupportedwiththepaymentsupp not found
r(111);

. tabstat lackofsupportedwiththepaymentsupp, stats(mean sd)

variable	mean	sd
lackofsupp-l	4.448819	.9146832

. tabstat lackofintranetconnection, stats(mean sd)

variable	mean	sd
lackofintr-n	4.204724	.8576322

. tabstat limitationinnetworkinfrastructur, stats(mean sd)

variable	mean	sd
limitation-r	4.102362	1.097144

. tabstat limitationinictinfrastructure, stats(mean sd)

variable	mean	sd
limitation-e	3.645669	1.004178

. tabstat frequentpowerdisruption, stats(mean sd)

variable	mean	sd
frequentpo-n	3.771654	1.024997

. tabstat softwareapplicationiseasytousean, stats(mean sd)

variable	mean	sd
softwareap-n	4.070866	.7886205

. tabstat idonotgetanyproblemwithusingthee, stats(mean sd)

variable	mean	sd
idonotgeta-e	4.165354	.9064476

. tabstat ercaofferedadequatetrainingabout, stats(mean sd)

variable	mean	sd
ercaoffere-t	3.283465	1.201174

. tabstat ercaisprovidingmecloseandfasttec, stats(mean sd)

variable	mean	sd
ercaisprov-c	2.496063	.7546051

. tabstat theeducationandawarenesscreation, stats(mean sd)

variable	mean	sd
theeducati-n	3.535433	1.245916

The Driving Force from the Adoption of E-Tax System in Ethiopia

Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables

. *(6 variables, 127 observations pasted into data editor)

. tabstat desiretoimprovethe relationshipwi, stats (mean sd)

variable	mean	sd
desiretoim~i	4.362205	.9229808

. tabstat desiretobuildorganizationalreputi, stats (mean sd)

variable	mean	sd
desiretobu~t	3.866142	.6468753

. tabstat desiretosatisfyrapidchangeofcust, stats (mean sd)

variable	mean	sd
desiretosa~t	4.448819	.8233561

. tabstat desiretoimproveorganizationalper, stats (mean sd)

variable	mean	sd
desiretoim~r	4.488189	.8438963

. tabstat desiretosimplifyassessandcontrolta, stats (mean sd)

variable	mean	sd
desiretosi~a	4.346457	.8671972

. tabstat desiretokeep taxpayerinformations, stats (mean sd)

variable	mean	sd
desiretoke~s	3.968504	.9753877