

*Determinants of Tax revenue in Jimma Zone: A study in Jimma City
Administration*

*A Thesis Submitted to the School of Graduate Studies of Jimma University for
Partial Fulfillment of the requirements for the Award of the Degree of Master of
Science in Accounting and Finance*

BY

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JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

SEPT, 2020

JIMMA ETHIOPIA

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DECLARATION

I, the undersigned, declare that this thesis entitled “*Determinants of Tax revenue in Jimma Zone: A study in Jimma City Administration*” has been carried out by me under the supervision of Mr. Hirko(MSc.) and Dr. Mathewas Kebede (PhD) . The thesis is my original work and it has not been submitted for the award of any degree or diploma to any university or institutions. All source of materials used for this work are dully acknowledged.

Name

Date

Signature

Fantaye Gebeyehu

CERTIFICATE

This is to certify that the thesis entitled “*Determinants of Tax revenue in Jimma Zone: A study in Jimma City Administration*” submitted to graduate studies of Jimma University in partial fulfilment of the requirements of the award of degree of Master of Science in Accounting and Finance is work carried out by Mis.**Fantaye Gebeyehu**, under our supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma. And the thesis report has been submitted for examination with our approval as University supervisors.

Co-Advisor’s Name	Date	Signature
Mr. Hirko(MSc.)	_____	_____
Dr. Mathewas Kebede (PhD)	_____	_____

ACKNOWLEDGEMENTS

First of all I praise you God! He sustained me by his everlasting love, mercy and support all the time. Mind blowing testimonies in my life explains you are really big!

Next to God, I would like to convey my profound thanks and genuine appreciation to my supervisors; Dr. Mathewas Kebede, my main advisor, and Mr. Hirko, co-advisor for their invaluable comments and constructive suggestions during my thesis work and inclination to share their academic practices and experiences. Their consistent professional wisdom and supervision greatly assisted me in identifying more strong research arguments that emanate from sound theoretical and empirical foundations.

I owe more than I can say to peoples around me specially; Mis. Kidist and Mr. Netsanet for their continued helps during this research work and willingness to devote their time in advising me on technical difficulties. Really many thanks! and let the blessing of lord be with you all the time.

ABSTRACT

*Government revenue in the form of tax is the main fiscal policy tool to finance domestic growth and to bring about desired level of economic stability. This study was conducted with the **objective** to investigate determinants of tax revenue in Jimma Zone with particular emphasis in Jimma City Administration among category "A" and "B" tax payers. To these end, the study made use of cross sectional design, and 223 sample respondents (tax payers) were selected using proportionate stratified random sampling approach. Of these respondent about 66 were category "A", while the remaining 157 were category "B" tax payers. Both descriptive statistics and econometric tool of analysis were employed for the analysis. A Binary logistic regression **methodology** was applied as an econometric tool to analyse the data. The **finding** of the study revealed that out of explanatory variables included in the model age (Age), education level (EL), tax audit practice (TA), tax fairness (TF) and tax payers' knowledge (TPK) were found positively significant at 5%, in influencing revenue, while social and economic instability (SEI) and tax system complicity (TSC) revealed negative and significant result at 5% level of significance in influencing performance of tax revenue in Jimma city revenue administration. Yet, tax payer personal financial ability (TPPFA) and service delivery of tax authority (SDTA) generated insignificant effect. Based on the findings, tax audit practice is effective in generating paramount of revenue for the city revenue administration. Thus, increasing tax audit practice would enable city revenue administration to sustain generation of revenue from its tax payers. Besides, ensuring tax fairness, giving a continued training to tax payers' to empower their tax knowledge and level of understanding had better been **suggested** as the focus area by the city revenue administration and when this is done, it will lead to a higher revenue performance.*

Keywords: *Determinants of tax, Revenue, tax audit, tax fairness, Jimma zone.*

TABLE OF CONTENTS

DECLARATION	iii
CERTIFICATE.....	iv
ACKNOWLEDGEMENTS.....	v
ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES AND FIGURES.....	x
LIST OF TABLES.....	x
LIST OF FIGURE.....	xi
ACRONYMS.....	xii
CHAPTER ONE.....	1
INTRODUCTION	1
1.1. Background of the study.....	1
1.2. Statement of the problem.....	3
1.3. Research questions	5
1.4. Objective of the study.....	5
1.4.1. General objective	5
1.4.2. Specific objectives	5
1.5. Significance of the study	6
1.6. Scope and limitation of the study	6
1.7. Organization of the Paper	6
CHAPTER TWO	7
REVIEW OF RELATED LITERATURE	7
2.1. Theoretical Literatures	7
2.1.1. Meaning and Concepts of Tax	7
2.1.2. Types of tax.....	7
2.1.3. Classification of tax payers.....	8
2.1.4. Meaning and concepts of tax audit	8
2.1.5. Types of tax audit.....	10
2.2. Empirical literature Review.....	13
2.2.1. Factors that affect tax payment	14
2.2.1.1. Education level of tax payer.....	14

2.2.1.2.	Gender of Tax Payer	15
2.2.1.3.	Knowledge of Taxpayer	15
2.2.1.4.	Tax Fairness	16
2.2.1.5.	Tax System Complexity	17
2.2.1.6.	Service delivery of tax authority	18
2.2.1.7.	Tax audit practice	19
2.3.	Summary of the reviewed literatures	20
2.4.	Conceptual Framework for the Study	21
CHAPTER THREE		22
RESEARCH METHODOLOGY		22
3.1.	Introduction	22
3.2.	Study Area	22
3.3.	Study Design.....	23
3.4.	Study Population.....	23
3.5.	Data type and Source	23
3.6.	Sample size and Sampling Technique	23
3.7.	Data Collection Methods	25
3.8.	Methods of Data Analysis	26
3.9.	Binary Logistic Regression	26
3.10.	Model Specification.....	27
3.11.	Measurement of Variables and Expected outcomes.....	28
3.12.	Econometrics Model Specification Tests	29
CHAPTER FOUR.....		32
DATA ANALYSIS AND PRESENTATION		32
4.1.	Introduction	32
4.2.	Socio-Demographic Characteristics of the Respondents.....	32
4.2.1.	Gender of the Respondent.....	32
4.2.2.	Marital status of respondents.....	33
4.2.3.	Types of business.....	33
4.2.4.	Category of tax payer	34
4.3.	Econometric Analysis.....	34
4.4.	Results of explanatory variables from Binary logistic regression models.....	36

CHAPTER FIVE	41
CONCLUSION AND RECOMMENDATION.....	41
5.1. CONCLUSION	41
5.2. POLICY RECOMMENDATIONS	42
5.3. DIRECTIONS FOR FUTURE RESEARCHS.....	42
REFERENCES	42
APPENDIX-I.....	48
Appendix II.....	52

LIST OF TABLES AND FIGURES

LIST OF TABLES

Table 3.1: Sample Size determination	25
Table 3.2: Independent variable and their measurement	28
Table 4.1: Gender of tax payer	32
Table 4.2: Marital status of tax payer	32
Table 4.3: Business types of tax payer	33
Table 4.4: Category of tax payer	33

LIST OF FIGURE

Figure 3. 1: The map of research area.....	22
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ACRONYMS

ANOVA	Analysis of Variance
CI	Confidence interval
EC	European Commission
ECC	Ethiopian Chamber of Commerce
ERCA	Ethiopian Revenue and Customs Authority
KII	Key Informant Interview
IRS	Internal Revenue Service
IT	Information Technology
OECD	Organization for Economic Co-operation and Development

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Taxation is a compulsory levy imposed on property by the government to provide security and create conditions for the economic well-being of members of any particular society; it is a major player in every economy of the world. To this end, development of any country depends on the volume of revenue generated and applied by the government on public for the benefits of that society. Hence, no economy can grow without adequate resources for funding infrastructural development and provision of power and public utilities and other related services. That is why it is said that taxes and tax systems are the fundamental components to build nations, and this is particularly true in the case of developing or transitional nations like Ethiopia (Agmas, 2016).

Likewise for most developing countries, taxation goes hand-in-hand with growth of an economy and taxes are lifeblood for the governments to deliver essential services and to bring about long-term investments in public goods (Dickinson, 2014). In relation to this, government revenues sourced from various tax and non-tax receipts and one of the oldest and sustainable source of development finance is taxation. Taxation is one of the most important elements in managing national income, especially in developed world and thus, plays a key role in civilized societies.

Developing countries are in difficulty to collect tax efficiently, because of many serious problems they face as to tax design and administration. They are also in trouble to provide basic social services from taxation (Damme, 2008). To reap the proceeds from taxation, the administrative aspect of a tax system must be given attention because how well a tax administration system performs depends on how well it achieves the goals for which it should be held accountable. An efficient tax administration system would enhance a high level of taxpayer voluntary compliance, which in turn would result in a high collection of potential tax revenue (Fischer, 1991). Thus, measuring the tax administration performance as well as improving it, is essential especially for developing countries like Ethiopia. Any tax in a tax system is vulnerable for evasion and fraud, which become the concern of many countries (Alemu and Deresse, 2009).

Tax fraud is an intentional discount of the tax liability curtailing from real transactions. As defined by Baurer (2005), tax fraud is a deliberate misrepresenting or hiding the actual state of their affairs to the tax offices to reduce their tax liability that they are intended to pay. Thus, it normally includes underreporting of profits and turnover, overstating deductions, underreporting employee wages, failure to register, hiding of taxable receipts coming from the production and distribution of real goods and services, overvaluing of value added tax spent on inputs and abusing tax return through fictitious transactions and trades..

Tax audit is a detailed examination into the activities of a taxpayer to regulate whether taxpayers' has been correctly declaring the tax liabilities or not (OECD 2006). The examination of the taxpayers' activities indirectly pushes voluntary tax compliance, and directly generates additional tax revenue collections. As a result, both (compliance by taxpayers and additional tax revenue) helps tax agencies to reduce tax gap between amount due and collected (Barreca *et al.*, 2004).

According to Ebrill *et al.*, (2001) though many developing and transitional countries adopt audit practice, irrespective of whether other aspects are working well. The rationale why many developing countries do not have an effective audit programs is; lacking of required highly skilled and appropriately paid audit practitioners in their country, nearly absent sound institutional audit practice, illegitimate cooperation between taxpayers and the auditors in tax authorities, lack of clear political support for the tax administration to induce its applicability, and lack of an appropriate legal and judicial environment apart from countries tendency to offset weak tax strategy. Further, audit system is not a very welcoming procedure for both the taxpayers and the economy as well. Of all others, having effective tax audit program is a key success factor for cost minimization and detection of tax evasion and fraud as well as proactively preventing tax frauds

Therefore, the objective of the current study is to investigate the determinants of tax revenue in Jimma zone with particular focus in Jimma city administration Hence, types and the frequency of tax audit being performed, audit coverage achieved, audit case selection methods, examination techniques being applied in the study area, effectiveness of tax audit program and parctices in terms of informative voluntary compliance in increasing the performance of tax revenue need to be empirically examined in relation to tax payesr of category "A" and "B" in the study area. Thus, issues in relation to taxation, problem of tax system, problem tax audit, role of tax audit in improving tax revenue in the city will be the major concern of the current study in whole.

1.2. Statement of the problem

Every country in the world collects tax to fulfill the government public expenditure. This becomes easy to government if only the tax payer willingly and voluntarily pay tax liabilities according to their countries tax laws. To meet this government needs of revenue, the three condition should have to take in to account to facilitate the voluntarily compliance of tax the tax system should be convenient to pay the tax liabilities both in time and situation. And the other one is the tax amount to be paid should be certain without any ambiguity and it depends on ability to pay. Finally the attitude of tax administration should be encouraging the tax payer by through helpful, progressive and non-adverse impact on tax payer (Singh, 2016).

Ethiopian tax is not only meant to raise revenue for current expenditures, but aims at directing economic agents to the development goals foreseen by the government through the incentive schemes embedded within the prevailing tax laws. In doing so, tax is a mechanism for reduction of income inequalities by redistributing income, promotion of capital investment and trade, encouraging and/or discouraging certain industries depending on how suitable for country's economic development program they are (Getaneh, 2011).

Tax audit is the independent examination of the returns submitted by taxpayers to the relevant tax authorities to ascertain the level of tax compliance by taxpayers. Therefore it is a means of ensuring compliance with the tax laws. The primary purpose of tax audit is to maintain the confidence in the integrity of the self-assessment system. It helps to improve voluntary compliance by detecting and bring to book those who do not pay the correct amount of tax (Adesina 2005).

The study conducted by Agumas (2016) revealed that tax audit play a significant role in improving tax revenue and enhances overall taxpayer, helps to generate sufficient government revenue. In addition to raising government revenue from auditing practices, efficiently detecting non-compliant taxpayers, applying appropriate sanctions, and publicizing results of audit activity, taxpayers get the message that any attempt to avoid tax presents a high risk of detection and the penalty for non-compliant taxpayers is substantial(Agumas,2016).

Effective tax audit is vital, as it assist government in collecting proper tax revenue necessary for budget maintaining, economic stability, organize degree of tax avoidance and tax evasion, ensure

strict compliance with tax laws, improve the degree of voluntary compliance and ensure the amount due collected and remitted to the government (ERCA, 2014). However, Yesegat and Fjeldstad (2013), a study on Taxpayers' views of business taxation in Ethiopia, show that the limited capacity of tax administration service delivery resulted on taxpayers' dissatisfaction which, in turn, result on low compliance level, and poor revenue performance in Ethiopia.

Total tax revenue performance has been relatively poor that accounts an average of 10.9 percent of GDP during 1990-94 and 12.9 percent of GDP during 2000-06. This is due to lack of awareness about taxes by businesspersons, low tax collection and administration system. To solve the problem, efforts were made by government to ensure effective tax audit program which is capable to investigate, detect and prevent loss of tax revenue, monitor tax payers in complying with tax procedures so as to reduce tax evasion and then to increase the revenue generation through tax by creating good tax administration. Though, there is an effort by the government there has been tax evasion and tax fraud from tax payers apart from not paying their duties on the right time that the authority scheduled. Irrespective of any sanctions some tax payers are ignorant to pay their tax on time and at the same time they even don't need to provide information necessary for auditing their business profit and evade part of it (Adediran, et al, 2013). So, this study is important to see the how the existing audit practice is important in affecting the revenue generation activities in Jimma city tax revenue office.

Amina *et al.*, (2015) study on the determinants of tax compliance for the case of Jimma zone category 'A' taxpayers, the author did not considered tax audit practice and its effect on revenue and only category "A" was considered. However, this study is expected to bridge this area and methodology gaps by considering the effect of audit practice on city's revenue and extends to include both category "A" and "B" apart from including the variables that were previously omitted. Study's by Tadesse and Goitom(2014) in Mekele city empirically examined factors influencing taxpayers' compliance with the tax system and they considered only category "C", hence the current study will consider this gap by including category "A" and "B" in Jimma city revenue authority. Further, Tesfaye (2018) studied tax audit practices and challenges Oromia revenue authority by considering the whole tax payers, while this study will be limited to city administration tax authority in Jimma on category "A" and "B". Thus, this study will fill this gap.

However, determinants of tax revenue in Jimma zone with particular focus in Jimma city administration were not studied by other researchers. For instance, studies conducted by Mesfin(2008), Abinet (2016), and Gitaru(2017) studied the effects of tax audit on revenue, significance and role of tax audit in increasing tax revenue, and effect of taxpayer education on tax compliance respectively. As all these studies suggest simply the relationship between tax audit practice and its effect on revenue alone in different category of tax payers. Thus, the current study will bridge the existing literature gaps by including some of the previously omitted variables apart from examining the determinants of tax revenue in Jimma city. Hence, in terms of the study scope and in terms of including previously missed important variables were the focus of this study. As far as the researcher's knowledge is concerned, there is no independent study carried out by focusing on similar topics especially in category "A" and "B" in Jimma city. The issues of determinants of tax revenue in Jimma Zone with particular focus in Jimma city administration together with the knowledge and the existing literature gap necessitated the conduct of this study. Therefore, the researcher adopted cross sectional study design and it is based on information that was collected from both taxpayers' and officials of tax departments from Jimma city administrations.

1.3. Research questions

This study has tried to answer the following basic research questions regarding determinants of tax revenue in Jimma zone with particular focus in Jimma city administration.

- What are the demographic determinants of tax revenue in Jimma city?
- What are the socio-economic determinants of tax revenue in Jimma city?
- What are the institutional determinants of tax revenue in Jimma city?

1.4. Objective of the study

1.4.1. General objective

The general objective of this study is to investigate determinants of tax revenue in Jimma zone with particular focus in Jimma city administration.

1.4.2. Specific objectives

- To examine the demographic determinants of tax revenue in Jimma city?
- To measure socio-economic determinants of tax revenue in Jimma city?
- To investigate the institutional determinants of tax revenue in Jimma city?

1.5. Significance of the study

Thus, the study has different Significances. First, ERCA Jimma city branch might be able to comprehend the existing tax audit performance, and learns some lessons & builds some corrective measures for the weaknesses of tax audit practice based on the recommendations that enhance the performance in the revenue generation process. Second, it is helpful for the taxpayers and other similar branch offices to have knowledge on tax audit practices. Finally, this study helps others broaden the skill regarding tax audit practice and it may give some highlights that would serve as a basis for further study.

1.6. Scope and limitation of the study

Though, Jimma zone is vast having a number of woreda tax authority and one tax office under city administration, this study is limited to Jimma city tax revenue office only and attempt made to consider category “A” and “B” tax payers under the revenue office. For this rationale, all tax payers under Jimma city administration were not considered by the current study. Therefore, this study focused on determinants of tax revenue in Jimma zone with particular focus in Jimma city administration among category “A” and “B” tax payers. In doing so, only category “A” and “B” were considered for this study as the previous studies considered either category “C”, “A” or “B” all in one or separately one category alone. Hence, determinants of tax revenue in Jimma zone with particular focus in Jimma city administration was critically investigated by this study. Besides to category limitation, this study was conducted based on the cross sectional data set that was collected from tax payers of the menytiond category in Jimma city since 2020.

1.7. Organization of the Paper

The research paper is organized in five chapters. The first chapter includes background of the study, Statement of the problem, objective, significance, scope and limitation which are the introduction part of the paper. The second chapter is considering review of theoretical and empirical literatures. While, the third chapter is provide methodology that was employed in answering the research questions. The fourth chapter was provided result and discussion. Finally, the fifth chapter is present conclusion, policy recommendation and suggestion for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter is organized in two sections. The first sections is reviews theoretical studies on tax audit and tax administration system while the second section presents the empirical evidence on tax audit practice and its effect on performance of revenue with related issues.

2.1. Theoretical Literatures

2.1.1. Meaning and Concepts of Tax

Various authorities and professionals in several ways have defined tax. Conceptually, taxes are a Compulsory contribution made by individuals and corporate bodies to the government of a given country with a view to complementing and/or providing income for the government (Aguolu, 2000). Taxes are a form of compulsory levy imposed by the government or other tax raising body, on income, expenditure, or capital assets for which the taxpayer receives nothing in return (Anyaduba and and Modugu, 2006). Tax can also be explained in the form that "pecuniary burden lay upon individuals or property owners to support the government, a payment exacted by legislative authority. A tax is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority".

2.1.2. Types of tax

Taxes consist of direct tax or indirect tax, and may be paid in money or as its labor equivalent.

Direct Taxes: A Direct tax is a kind of charge, which is imposed directly on the taxpayer and paid directly to the government by the persons (juristic or natural) on whom it is imposed. A direct tax is one that cannot be shifted by the taxpayer to someone else this includes income tax, Corporation Tax, Property Tax, Inheritance Tax, and Gift Tax,

Indirect Tax: An indirect tax is a tax collected by an intermediary (such as a retail store) from the person who bears the ultimate economic burden of the tax (such as the customer). An indirect

tax is one that can be shifted by the taxpayer to someone else. An indirect tax may increase the price of a good so that consumers are actually paying the tax by paying more for the products. Indirect taxes are including Customs Duty, Central Excise Duty, Service Tax, Sales Tax, Value Added Tax (VAT) and Securities Transaction Tax (STT).

2.1.3. Classification of tax payers

All legal entities are required to register their financial activities in the books of journal and Ledger as prescribed in the Commercial Law and are obliged to keep their accounting books and the relevant supporting documents in accordance with the accepted accounting principles and Standards. According to Ethiopian proclamation number 285/2002, taxpayers are classified into three major categories based on the type of their legal obligations for records keeping: Category “A” Taxpayers, Category “B” Taxpayers and Category “C” Taxpayers. However, for the purpose of this study, only category A and B were substantiated.

Category “A” Taxpayers:

As of Ethiopian Tax Proclamation, 979/2016 category “A” taxpayers as any company incorporated under the laws of Ethiopia or in a foreign country and any business having an annual turnover of Birr 1,000,000 or more, have the obligations to recording their business activities in the books of journal and ledger and keeping the supporting documents. They are required to submit Balance sheet, profit and loss statement incorporate gross profit and the manner in which it is computed, general and administrative expense, depreciation expenses, provisions, and reserves to the Revenue Authority at the end of the year.

Category “B” Taxpayers:

Unless not already classified in category “A”, any business having an annual turnover of over Birr 500,000 would be classified under Category “B” taxpayers. This category of taxpayers should submit to the Revenue Authority profit and loss statement at the end of the year similar to category ‘A’ taxpayers.

2.1.4. Meaning and concepts of tax audit

Tax audit is an activity or a set of activities performed by tax auditors to determine at taxpayer’s correct tax liabilities for a particular accounting or tax period, by examining a taxpayer’s

organization procedures and financial records in order to assess compliance to tax laws and verifying true, fair, and reliable, accuracy of tax returns, and financial statements (ERCA, 2010).

It involves examination of financial statements, books of accounts and vouchers of a taxpayer by tax auditors to ascertain whether the taxpayer has accurately considered revenues and expenses when determining the taxes shown in the declarations as per the requirements of the tax laws. It also involves other approaches such as observation of premises, direct monitoring of receipts in cash businesses, use of mark-up techniques and analysis of key ratios (ERCA, 2014). Tax audit is the independent examination of the returns submitted by taxpayers to the relevant tax authorities to ascertain the level of tax compliance by taxpayers (Ebimobowei, 2013).

Tax audit is the examination of an individual or organization's tax report by the relevant tax authorities in order to ascertain compliance with applicable tax laws and regulations of state. An audit will examine the issues seen as most substantial to achieving an accurate assessment of a taxpayer's tax liability. Generally, these issues will include any signs of significant unreported income (for example, as may be suggested by a very low ratio of net/gross business income ratio computed from a taxpayer's return) or potentially over-claimed deduction items that may be apparent from an examination of a taxpayer's tax return and other information (Kircher, 2008).

Tax audit is important because it assist the government in collecting appropriate tax revenue necessary for budget, maintain economic and financial order and stability, and ensures that the taxpayers submit satisfactory returns. Furthermore, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers and to ensure that the amount due is collected and remitted to government tax audit is essential according to Ola (2001).

Most taxpayers' report their tax liabilities more accurately if they believe that the tax administration has the capacity to detect any unreported liabilities and that heavy penalty might be applied when they are detected (Biber, 2010). Thus, tax audit results in increased tax revenue in two ways: (1) directly through assessment of additional taxes; and (2) indirectly by discouraging underreporting of liabilities by all taxpayers. Moreover, Barreca and Ramachandran (2004) noted that the purpose of tax audit is to check the evasion of tax and ensure compliance in accordance with the laws and regulations.

2.1.5. Types of tax audit

Audit is the examination of accounting documents and of supporting evidence for the purpose of reaching an opinion concerning their propriety. It is an examination intended to serve as a basis for an expression of opinion regarding the fairness, consistency, and conformity with accepted accounting principles of statement prepared by a corporation or other entity for submission to the public or to other interested parties. Tax audit is therefore a means of ensuring compliance with the tax laws. The primary purpose of tax audit is to maintain the confidence in the integrity of the self-assessment system. It helps to improve voluntary compliance by detecting and bring to book those who do not pay the correct amount of tax (Adesina, 2005).

Modern tax administrations have developed a range of audit “products” to provide a more tailored response to the risk being addressed through the audit activity. Various terminologies have evolved to describe different types of tax audit activity; Audits can differ in their scope and the level of intensity to which they are conducted. As Harrison and Krelove (2005), ERCA(2014), Ebrill *et al.*, (2001), Biber (2010) and OECD (2006) typical range tax audit program in a function based administration includes desk audit or verification, field audit, registration check, advisory audit, record keeping audit, refund audit, issue-oriented audit, comprehensive or full audit and fraud investigation. The following briefly reviews these tax audit types.

1. Desk audit or verification

This type of audit can be conducted in relation to specific issue audits of a small enterprise or employee when the auditor is confident that all necessary Information can be determined by accompanying the examination in the office. Based on (1) basic ratios comparing (with previous periods or other taxpayers in similar industries) and (2) by crosschecking of information included in the taxpayer files. It involves basic checks conducted at the tax office when the auditor is confident that all necessary information can be ascertained through in-office examination. Information technology (IT) systems should provide strong support for these verifications. It is usually carried out annually and can be used as a first examination of declarations, analyzing ratios and cross checking information to determine if further investigation is warranted (ERCA,2014).

2. Field Audit

It is a detailed examination of taxpayers' books and records to determine whether the correct amounts were reported on the tax returns. The auditor may also obtain information from other sources such as banks, creditors and suppliers, to confirm items on returns. A field audit usually includes one or more of the following taxes: income, franchise, sales and use, withholding, and excise taxes. The audit is conducted at taxpayers' place of business, home, or at the office of their accountant, attorney, or other person who may represent them. The auditor tries to select the place that is most appropriate under the circumstances and most convenient for them Harrison and Krellove (2005)

3. Registration check

This type of audit is a quick check on businesses to establish that they are correctly registered for all their taxpaying obligations. Information from the business license office, customs, third parties or other audit activities may alert the administration that a check is necessary Zamaróczy, undated). It uses the form of unannounced visits to taxpayer's premises to detect businesses operating outside the tax system. Stated, during this visit, the tax officer ensures that the taxpayer: (1) has a basic understanding of their obligations; (2) keeps appropriate records (book keeping review should be mandatory in case of voluntary compliance when the turnover of the taxpayer is below the registration threshold); and (3) issues proper invoices when required by law. This type of visit is a quick check on businesses to establish that they are correctly registered. It should not take more than half a day Ebrill et al. (2001).

4. Advisory Audit

A visit to newly established businesses advising them of their obligations in terms of tax types, filing of declarations, payment of amounts due, and records to be maintained risk of audit and sanctions of noncompliance. This is particularly necessary when introducing new laws.

5. Record keeping Audit

Is a check on enterprises that may have a reputation of not keeping adequate records? The visit would point out the obligations of the taxpayer with regard to keeping of records and the consequences of failing to do so. These audits should be followed up and penalties imposed if the taxpayer continues to disregard record keeping requirements.

Auditors may unexpectedly visit the taxpayers' business premises to check whether the VAT invoices are issued and appropriate records are kept. According to OECD (2006 a).The visit spectacles the obligations of the taxpayer regarding the keeping of records, and followed up with penalties if the taxpayer continues to disregard record keeping requirements

6. Refund Audit

Verifying the taxpayer's right to a refund prior to processing the refund. Usually under taken for first refund claims as well as where the refund claim varies significantly from established patterns and trends. Refund audit carried out particularly for new registrants in addition it should emphasis only on the period covered by the claim Ebrill et al. (2001).

7. Issue-oriented audit

It should be directed at verifying items for which errors have been detected in the returns (atypical ratios, gross revenues, comparison of gross sales to imports). It should focus on a single tax type and covers no more than one or two reporting periods Biber (2010).

8. Single-issue audits

This type of audit focused on a single tax type, single aspect or a single period; given their narrow scope, single-issue audits typically take less time to conduct and can be used to review large numbers of taxpayers involved in similar schemes to conceal noncompliance. For instance, it may confine to one item of potential noncompliance that may be apparent from examination of a taxpayer's return. The auditor may be only examining whether the taxpayer has met obligations in respect of employment tax, VAT, or examining a specific expense claim Biber (2010).

9. Comprehensive or full audit

This audit covers all tax obligations over a number of tax periods, or extended to several years up to the limit provided for in the law. The objective is to determine the correct tax liability for a tax return as a whole. It typically entails a comprehensive examination of all information relevant to the calculation of a taxpayer's tax liability for a given period. Cases where serious underreporting or evasion has been detected under any of other audits should be forwarded to a unit responsible for undertaking comprehensive audits of all tax liabilities. It should be applied to those taxpayers if there is an indication of under reporting that may affect across taxes. This audit is time consuming

and costly to undertake, it requires considerable resources and reduces the rate coverage of taxpayers that could otherwise be achieved by a more varied mix of audit types (ERCA,2014).

2.2. Empirical Literature on Determinants of tax revenue

A number of empirical studies examined tax administration in both developed and developing countries, tax audit program in particular. For instance, (Iwarere and Henry, 2015), Gebeyehu (2008), Kleven *et al.*, (2010), and Anyaduba and and Modugu (2006) have been taken; a brief review of each of these aforementioned studies is presented in the following discussions.

Mesfin (2008) examine the effects of tax audit on revenue generation in Federal Inland Revenue Service, Abuja experience. They try to determine the relationship between the tax audit and revenue generation in Federal Inland Revenue Service. The Data collected through questionnaire and review of several publications that are relevant to the study, was presented using tables and percentages; for the test of hypotheses and analysis of Variance (ANOVA). The study revealed that tax audit has significant effects on revenue generation and it has a positive relationship with the revenue generation in Federal Inland Revenue Service.

This means that an increase in tax audit increases revenue generation from taxes; an increase in tax audit increases tax bases for the government and an increase in tax audit reduce tax fraud in the tax system. This is in part in agreement with there is a positive relationship between the audit and the voluntary compliance. Furthermore, the authors suggested that tax audit should be carried out on a routine basis to ensure that actual revenue collected is what the relevant tax authority remits to the government. Tax audit prevents tax evasion by the tax evaders and avoiders. Internal mechanism to check and monitor the staff of the tax audit department should be put in place to minimize the level of corruption and enhance effectiveness of the tax audit.

Abinet (2016) also study on the basic concepts of tax audit, and analyze the significance and role of tax audit in increasing tax revenue and in strengthening tax administration capacity. Data collection methods adopted includes questionnaires and in-depth interviews. The results of the study shows that, tax audit practice as seen in Addis Ababa City Administration carried out mainly based on internal documents produced by taxpayers. It is clear that, documents internally produced cannot be a reliable source of information.

2.2.1. Factors that affect tax payment

2.2.1.1. Education level of tax payer

Tax knowledge is a critical element in a voluntary compliance within tax system. If the taxpayer knows the purpose and how it will be used for the government to intended public expenditures, this improves the amount of tax revenue that collected without compliance cost (Kasippilai, 2000). According to Gitaru (2017) Education is necessary to increase public awareness especially in areas concerning taxation laws, the role of tax in national development, and especially to explain how and where the money collected is spent by the government. On his study he relieved that compliance could be influenced by educating taxpayers of their social responsibilities to pay and thus their intention would be to comply. As a behavior problem, tax compliance depends on the cooperation of the public.

Taxpayer's awareness can be described as a condition when taxpayers understand how to calculate and pay their tax liability for payment. Generally, knowledge of the taxpayer to pay taxes will create civic mindedness for the payment of tax that has been collected by government and increase the follow up of the payer to know on what governments spent (Siahaan, 2010). Optimistic assessment of taxpayers to the application of state functions by the government will mobilize the taxpayers to meet their tax duties by paying taxes according to their ability to contribute without externally influenced by other parties (Nurmantu, 2010).

Clifford *et al.*,(2013) study on the effect of taxpayer education on voluntary tax compliance, among small and micro-enterprises in Mwanza city in Tanzania. For the study he used survey data gathered through questionnaires. The result of his this study show that the provision of tax education has influence on the way of taxpayer makes tax compliance decision. Chan *et al.* (2000) found that there is a positive relation between educational level and tax compliance. Kirchler *et al.*, (2006) stated that higher knowledge concerning tax leads to higher compliance and poor knowledge concerning tax lead to higher noncompliance. In summery it can be said that general tax knowledge is very vital to understand tax law and regulations and to comply with them.

2.2.1.2. Gender of Tax Payer

The relationship between gender and tax compliance is toward the argument that female tax payers are more compliant than male counterpart. In the findings of Tadesse and Goitom (2014) the female taxpayers were more compliant than male taxpayer. Also, the finding of Mohan (2001) and (Amina and Saniya, 2015) were consistent with Tadesse that male taxpayer have less complaints than females taxpayer. Niway and Wondwossen (2016) also concluded that a female was more complaints. Efeeloo and Dick (2018) also concluded a female is more compliant. However, this factor still not comes in to common conclusion; Richardson (2006) suggests that gender has no significant impacts on compliance. To the gender has, impacts on tax compliance directly have effect on tax administration.

2.2.1.3. Knowledge of Taxpayer

The influence of tax knowledge on compliance behavior has been defined in many researches. The level of education received by taxpayers is main factor that contributes to the understanding about taxation especially concerning the laws and regulations of taxation (Eriksen and Fallan, 1996). Tax knowledge is a critical element in a voluntary compliance within tax system. If the taxpayer knows the purpose and how it will be used for the government to intended public expenditures, this improves the amount of tax revenue that collected without compliance cost (Kasippilai, 2000). The absence of tax knowledge may lead to noncompliance behavior among taxpayers. This can be takes place either purposefully or unintentionally.

Taxpayer's awareness can be described as a condition when taxpayers understand how to calculate and pay their tax liability for payment. Generally, knowledge of the taxpayer to pay taxes will create civic mindedness for the payment of tax that has been collected by government and increase the follow up of the payer to know on what governments spent (Siahaan, 2010). Optimistic assessment of taxpayers to the application of state functions by the government will mobilize the taxpayers to meet their tax duties by paying taxes according to their ability to contribute without externally influenced by other parties (Nurmantu, 2010).

Nugroho (2012) describes consciousness of paying taxes as a form of moral attitude which gives a contribution to the state to support the development of the country economy and attempt to comply with all rules, regulation and directives set by the governments and to pay the amount assessed

voluntarily without any pressure externally. According to (Siahaan, 2010) there are four indicators that will enhance taxpayer's awareness about tax. The first one is building a helpful perception about tax obligation for the society the reason for the collection is needed. The second task is tried to communicate about taxpayer's conduct and characteristics. The other one is improve taxpayer's knowledge about tax rules and regulations that operated by the tax administration that practical up to that date by creating training opportunity for that tax payer. And the last one is making periodic tax socialization for the general public to advance their knowledge about tax.

Tesfaye (2018), conducted a study to assess the practices and challenges of tax audit in Oromia revenue authority. The finding of the study relived that tax auditors were not made sufficient efforts to create taxpayers' awareness that might help revenue authority to increase voluntary compliance of taxpayers. On the other hand Agumas (2016) study show that most of tax payers are not voluntarily disclose their views freely due to lack of knowledge, lack of awareness and other reasons, their exclusion has little impact on the validity of the results.

Samuel and Viswanadham (2016) conducted research on assessment of business income taxpayers' tax knowledge, tax complexity, and tax compliance in case of Amhara Regional State of Ethiopia. They conclude in aspects of tax payers, most of the respondent has general knowledge why they pay tax but not know the detail of tax system. And taxpayer who has low income did not know both the reason why they pay and the tax information at all. And their low level of awareness indicates that it has significant impact on compliance as well as on a tax administration.

2.2.1.4. Tax Fairness

Verboon and Goslinga (2009) investigated on the relation between fairness consideration and tax compliance attitude and intentions. The researchers used the variable of personal norms, procedural and distributive justice, tax compliance attitude and intention to comply with tax regulations. Finding of the study indicate that distributive fairness positively affects both tax compliance and intention. And the result shows that to promote tax compliance among small business taxpayers ax authorities could take corrective action to ensure that taxpayer identifies the tax system as fair. These also positively affect the tax administration as it affects tax compliance.

According to Chau and Leung (2009) Taxpayers can perceive the tax system as unfair if they believe that they are paying more than they receive from government and or in relation to what other taxpayers are paying. In addition Mesele and Tesfahun (2016) concluded that some of the category “A” and “B” tax payers and many of category “C” tax payers don’t agree with fairness in tax assessments in the Dessie town. They suggested that such problems might be occurred either due to the lack of impartiality or independence of tax authority employees in the town.

2.2.1.5. Tax System Complexity

The tax rules should be simple, understandable and clear in so as to enhance tax compliance. Taxpayer education will enhance the level of voluntary tax compliance and reduce tax evasion. A tax system may be complex and thus with greater compliance costs for many reasons and in many ways. The immediate costs of complexity cannot be measured by looking solely at the existing tax rules and regulation themselves. The main basis of compliance cost involves taxpayers’ performance, often involving recordkeeping, so estimates of incremental paperwork costs are usually more validity than the counts of the number of pages of rules (Kaplow, 1994).

Some complexity arises from poor rule writing, which involves a pure waste that cannot be easily understandable. Other complexity arises from the rules that consciously deviate from tax principles so as to subsidize or benefited certain activities and groups these cause the complexity for other tax payers. If the law of tax becomes problematic, it is difficult to administer the tax system because of its difficult to measure the performance of the authority. Tax complexity, usually arises due to the increased sophistication in the tax law without taking into account the tax payer’s understanding (Richardson and Sawyer, 2001). Pau *et al.*, (2007) provide contradicted evidence on the tax simplification in New Zealand. The researchers tested the newly written income tax act 2004, TIBS and binding rulings using readability measures namely; the flesch reading ease index, Flesch-Kincaid grade level index, average sentence length and percentage of passive sentences. They found significant improvements can be made to reduce the complexity or encourage understandability in tax simplicity through these measures.

Sawyer (2007) agreed that there have been some improvements in tax simplification, but it needs continuous improvements to change the legislation has in part postponed the rewrite program that can benefit the legislation duty by improving these easily understandability of the laws. On the

other hand Saw and Sawyer (2010) examined the readability of a sample of the selected sections of the Income Tax Act 2007, TIBs and binding rulings by using previous measures of Pau *et al.*, (2007) they reach on similar conclusion.

In Australia, McKerchar (2005) who carried out a survey among tax agents and she noted that tax agents were frustrated with the increasing complexity of the tax law. Also she further claimed that the tax agents want a much simpler and easy to understand tax laws, with less regulatory material and change in the system. Alike findings were recognized by (Kirchler *et al.*, 2006). They found that taxpayers were more likely to obey when the tax law was perceived as less complexity that means as the regulations become less difficult the compliance become more.

The actual usage of an income tax or personal consumption tax rather than a sales tax or a head tax involves the use of a considerable and complex set of rules impressive important compliance costs on taxpayers and administrators for the purpose of considering each taxpayer's conditions more correctly for some belief of their equitable tax liability. Thus, even fundamental tax reforms in tax laws can be analyzed as an indication of changing greatly complexity, raising the trade-off between compliance costs and accuracy of assessment to collect tax revenue (Kaplow, 1995).

Tax law complexity plays an important role in increasing the costs of tax compliance. Tax collection and efficiency costs are the two major types of costs associated with raising government tax revenue and efficiency costs are the major costs. Collection costs comprise government administration costs and the compliance costs incurred by taxpayers in meeting their obligations under tax assessment acts (Oliver and Bartley, 2005). Compliance costs can also be further categorized into obligatory costs that taxpayers must undergo to meet their legal tax liabilities and voluntary costs, which refer to additional costs that the taxpayers may choose to determine or minimize their tax liability (Gupta, 2004). Tax ccomplexity in general resulted in to rise to higher administrative and compliance costs (Shaw *et al.*,2010).

2.2.1.6. Service delivery of tax authority

Service was an act, or performance, of people offered by one party to another. In addition, a service is an economic activity that creates value and provides benefits for clients at specific times

and places, with the result of bringing about a desired change, in or on behalf of, the recipient of the service (Lovelock, 2004).

OECD (2012) stated that complexity of tax laws coupled with the relatively large populations of taxpayers to be administered mean that all revenue bodies must rely substantially on taxpayers' voluntary compliance to achieve the outcomes expected of them. It is axiomatic that to achieve high levels of voluntary compliance, taxpayers and their representatives must have a good standard of services to help them determine their obligations under the laws and to complete the steps required to acquit those obligations.

Therefore, a quality taxpayer service program should ensure that there is timely handling of taxpayer complaints and the tax officials have empathy and are competent. Security of taxpayers' documents and tax affairs should be of paramount. The physical appearance of equipment, facilities and layout should facilitate taxpayers' services (Aslund, 2012). A well-implemented taxpayer services will result in an informed taxpayer who is able to register voluntarily, fill his returns in time and honour his tax obligations. The compliant taxpayer will be able to contribute his share of income tax collections to the overall performance of income tax revenue collections (Jenkins and Khadka, 2011).

The performance of tax revenue collections is anticipated to increase with improved and sustained taxpayer services, change of attitude and conduct of KRA staff aimed at customer service and simple and under-stable tax administrative procedures put in place. The taxpayers are likely to be responsive to tax laws and practice by complying in voluntary registration, filing and payment (Walter, 2015). Generally, an effective and efficient program of taxpayer service activities is a critical objective of all revenue bodies.

2.2.1.7. Tax audit practice

Tax audit is one of the extensive standing and accepted compliance strategies in tax administration. The tax audit program provides visibility to the compliance and enforcement arm of the tax administration (Thomson, 2008). The auditing and spot-checking of records, coupled with a system of adequate penalties for detected cases of fraud, is the universal method for tax control and the prevention of tax evasion. Tax evasion can be brought to light only by a means of an effective audit program (Tait, 1988). Tax audit also helps tax agencies to achieve revenue objectives that

ensure the fiscal health of the country and individual states. It derives voluntary compliance and generates additional tax collections, both of which help tax agencies to reduce the tax gap between the taxes due and the amount collected (Barreca and Ramachandran, 2004).

Getaneh (2011) study on tax audit practice in Ethiopia in case of federal government he stated that tax audit program is mainly directed to specific segments and sectors those have large tax potential with less emphasis to medium and small category of taxpayers community. In addition, the audit coverage is unsatisfactory that might be due to inappropriate audit type adopted and resource constraint. The development of an effective tax audit program typically addresses coverage (percentage of taxpayers to be audited), selection of audit cases, methods (types of audits to be performed, duration of audit, approaches taken by auditors), staffing and training (staff resources needed to implement the audit program and the training provided for them), and monitoring activities (Ebrill *et al.*, 2001).

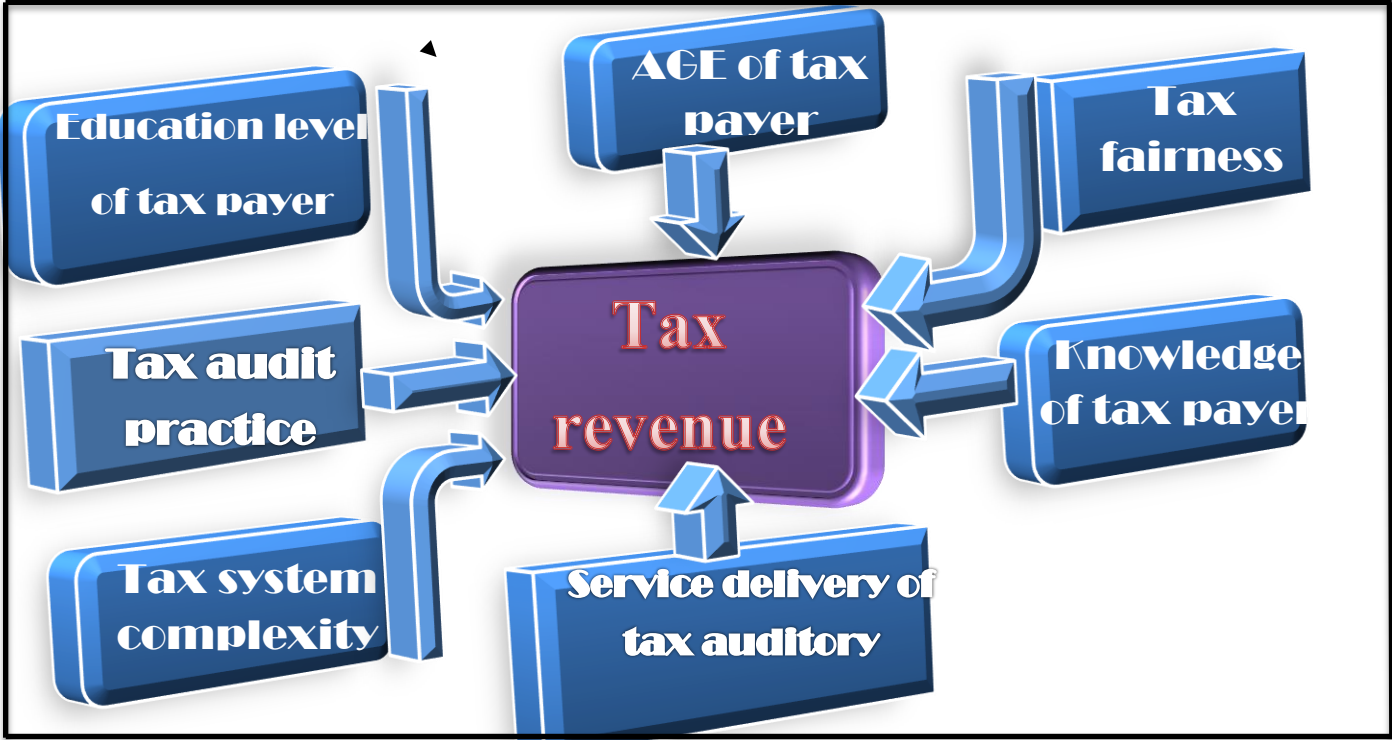
2.3. Summary of the reviewed literatures

This section reviews both theoretical and empirical literatures regarding different theories of tax, types of tax, audit and its system as well practice and principle. Empirically, most studies focused on tax administrations and its challenges with few paying attention on audit practice. However, almost no studies on tax audit practice and its effect on performance of revenue in Jimma city from category “A” and “B”.

Empirically, tax audit actually has an effect to revenue collection as according to the finding of many authors. Among other the work of Gitaru (2017), Gebeyehu (2008), Iwarere and Henry (2015), Amina *et al.*, (2015), Agumas(2016) and Getaneh, (2011). However all this study concentrated on overall tax challenges, audit practice and the related issues in tax payers , with no literature paying attention to Tax Audit Practice and its effect on Performance of Revenue in Jimma Zone among category “A” and “B”: Case of Jimma City Administration exactly. Thus, this study bridge the existing literature gap, apart from employing logistic regression to see the effect of tax audit practice in revenue generating activities of Jimma city administration.

2.4. Conceptual Framework for the study

Based on the theoretical and empirical literature reviewed the following conceptual framework was developed for the current study, determinants of tax revenue in Jimma zone with particular focus in Jimma city administration.



Source: Own conceptualization for the study, 2020

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter presents a detailed description of the research methodology. The Methodology is the detailed procedure used to answer the research questions (Oso and Onen, 2005). Methodology includes a description of research design, research site, population, sampling techniques, research instruments, and data collection procedures and data analysis.

3.2. Study Area

This research conducted in Jimma city. Jimma city is selected because of the existence of large numbers of category “A” and “B” tax payers as compared to the other woreda of the zone. The city is Located 325 kilometers south of Addis Ababa, the city has a latitude and longitude of 6°45’N 38°25’E and an elevation of 1776 meters. The city has an estimated area of 11.4 km². It has an average temperature of 19.2°c and annual average rain fall of 1450 mm. It has 17 administrative kebeles. The population living in Jimma city is estimated to be 195,288 (one hundred ninety-five thousand two hundred eighty-eight of which 97,259 of them are male and 97,969 of them are female, with areas of 50.52 square kilometers (CSA, 2017).

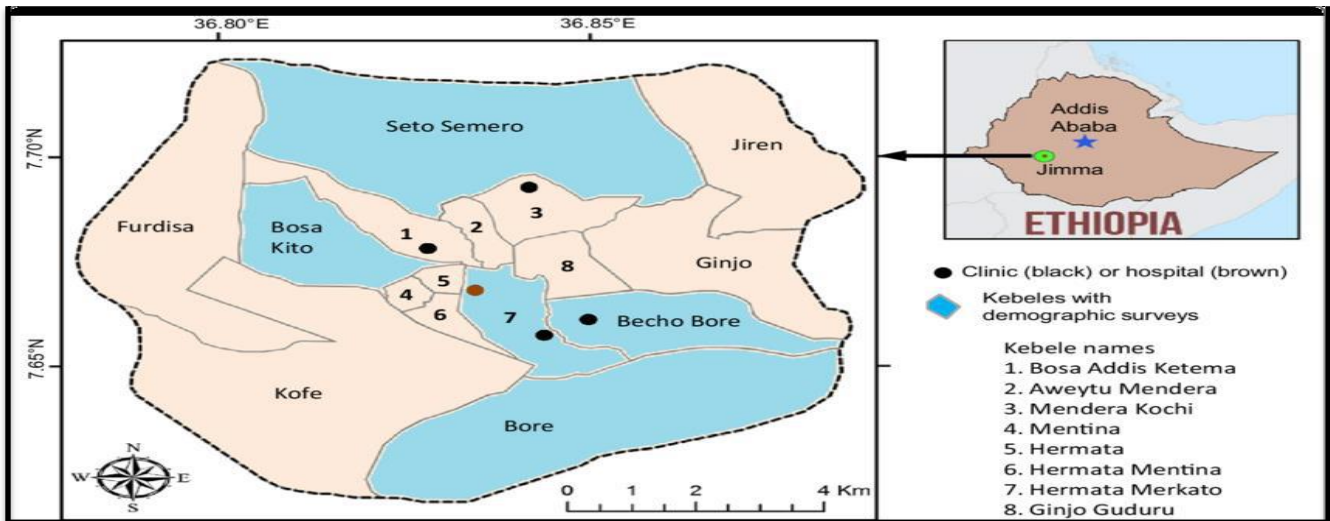


Figure 3. 1: The map of research area

3.3. Study Design

The study made use of a cross sectional study design to meet the objective of the study. This method was preferred because it enables to collect data at one point in a time to answer questions concerning the current status of the subject of this study. Besides, it also used to determine and reports the way things are and also helps a researcher to describe a phenomenon in terms of attitude, values and characteristics. Moreover, it helps in collecting information by interviewing or administering a questionnaire to a sample of individuals(Orodho,2003).

3.4. Study Population

The total population of this research was category “A” and “B” tax payers in Jimma city Administration. According to Income tax proclamation number 979/2016 category “A” tax payers has a business having an annual revenue of Birr 1,000,000 (One million Birr) or more. And that of category “B” tax payers have a business having annual revenue of Birr 500,000(Five hundred thousands) and above. The motivation of considering category “A” and “B” tax payers is that taxpayers in these groups are considered as fully engaged in self-assessment system because the law requires them to declare their income or keep books of account. Hence, the tax payers under these categories were considered as a target population for this study.

3.5. Data type and Source

The proposed researcher used both primary and secondary data to achieve the broad objectives of the study. The primary data was collected from category “A” and “B” tax payers according to samples that was selected from the target population. And purposively the key informants were selected from tax office of the city. In addition to this researcher used secondary data as source of data. Among the secondary data annual tax report that was prepared by the city tax office and materials that regional tax bureau has been published on tax area. Internets and related literature were used to achieve the objectives apart from literature conducted on tax issue.

3.6. Sample size and Sampling Technique

Appropriate sample size depends on various factors relating to the subject under investigation including time, cost, data and degree of accuracy. In the first stage, Jimma city was selected

purposively owning to zonal city where large numbers of category “A” and “B” tax payers as compared to the other woreda of the zone.

A combination of probability and non-probability sampling techniques used to select the sample population. That means the selection of the study area in the city and selection of respondents from employs of city tax office for interviews were based on purposive sampling. Besides, a stratified random sampling technique used to collect data from sample respondents. The selections of respondents from sample population for questionnaires were based on stratified sampling based on the strata. Stratified sampling used because the total population of the study is heterogeneous. This method involves the division of a population into smaller groups known as strata which formed based on members' shared attributes. The main advantage with stratified sampling is how it captures key population characteristics in the sample and Stratified random sampling is unbiased sampling method of grouping heterogeneous population into homogenous subsets then making a selection within the individual subset to ensure representativeness. This method of sampling produces characteristics in the sample that are proportional to the overall population.

In order to make representative samples, first the list of all tax payers under category “A” and “B” were used. The total tax payers under category “A” and “B” in Jimma city were 1352 (Jimma city Revenues Authority, 2012). Out of which 397 were category “A” and the rest 955 were category “B”. It decides to use 223 as sample participants by using the following simple formula. The sample size will determine using Krejcie and Morgan’s(1970) formula for sample size determination.

$$S = \frac{x^2 \times N \times P(1 - P)}{d^2(N - 1) + X^2 \times P(1 - P)}$$

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size=1352

P = population proportion (assumed to be 50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

$$S = \frac{3.84 \times 1352 \times 0.5 (1-0.5)}{0.0036(1352-1) + 3.84 \times 0.5(1-0.5)} = 222.87 \sim \underline{\underline{223}}$$

Table 3. 1: Sample Size determination

Sector	Population	Formula	Sample size	Sampling Technique
Category “A”	397	$\frac{223}{1352} = 0.165$ $0.165 \times 397 = 66$	66	Proportionate stratified Random sampling
Category ‘B”	955	$0.165 \times 955 = 157$	157	Proportionate stratified Random sampling
Total	1352		223	

In addition to these stratified random sampling the researcher was used 5 in-depth KII on employees of Jimma city revenue office.

3.7. Data Collection Methods

Data collection tool that used for this research is structured questionnaires in such a way to address each research objectives, variables and semi-structure guide for in-depth interview. The questionnaires were including both closed and open-ended questions on various factors that influence the performance of tax revenue apart from tax auditing system. The questionnaires were translated to local instruction (Afan-Oromo and Amharic) to reduce barriers of the language to maintain the quality of actual field survey. These questionnaires administered through “drop and pick later” method, and structured interview.

The study used quantitative and qualitative approach to identify determinants of tax revenue in Jimma zone with particular focus in Jimma city administration. The quantitative part used questionnaires, while qualitative aspect used interview to triangulate the data and so as to achieve the third objective of this study. These designs also used to describe analysis and interpret nature of the problem under the study based on data collected from primary and secondary sources. To meet the objective of the study, questionnaires were used to collect data from sample respondents. It contains both closed and open-ended formats. It was selected because; it helps to gather data with minimum cost faster than any other tool. Moreover, the respondents could read and answer

the questionnaire more freely to express their idea on the issue. These questionnaires was administered through “drop and pick later” method, and structured interview. In-depth interview is a method of data collection procedure which is a direct one-to-one personal interview. A detailed background is provided by the respondents and elaboration on the data concerning the respondent’s opinions, values, motivation, expression, feeling etc. were considered. Besides, it helps to triangulate the information collected through questionnaires and also helps to thoroughly investigate the information from different groups.

3.8. Methods of Data Analysis

The collected data was analyzed using a mixed method research design. As it is stated under the subtopic of type of research, this research is of cross-sectional in type. Accordingly, for realization and successful accomplishment of the study, data collected from different primary and secondary sources were recorded, edited, organized, analyzed, interpreted and presented in relation to research questions. While, STATA version 13 was statistical software that was used for analysis of collected data. Percentages, frequencies and rates were calculated and the results are presented in tables and graphs. Furthermore, 95% CI and P-value used to assess the strength of association and statistical significance.

3.9. Binary Logistic Regression

When the dependent variable in a regression model is binary (0, 1), the analysis could be conducted using either linear probability or logit/Probit models. But, the linear probability model may generate predicted values less than 0 or greater than 1, which violate the basic principles of probability and the coefficient of determination (R^2) is likely to be much lower than one. For this reason, it is questionable to use R^2 as a measure of model fitness (Gujarati 2003). The other problem with the linear probability model is the partial effect of any explanatory variable is constant (Maddala, 1983). On the other hand, the choice of logit or probit model is depending on the assumption of the distribution of the error term (ϵ) (Gujarati, 2003). Hence, this study adopted a binary logistic regression model to identify determinants of tax revenue in Jimma zone with particular focus in Jimma city administration among category “A” and “B” tax payers.

3.10. Model Specification

Amina and Saniya (2015), study on tax compliance and its determinant in Jimma zone. They found out that tax fairness, tax system complexity, tax audit and level of education have influence on tax compliance. On the other hand Endale (2019) have explored that Tax System Complexity, Service delivery of tax authority and Knowledge of tax payer have challenges on tax administration on category “B” tax payer, were binary logistic regression was used in the study.

Hence, following the worked carried out by Amina and Saniya (2015) and Endale (2019) this study was used binary logistic regression model to see the effect of tax audit practice on the performance of tax revenue on category A and B in Jimma city. Logistic regression calculates the probability of an event occurring over the probability of non-occurring and the impact of independent variable is explained in terms of marginal effect. The dependent variables take a value “1” if tax audit practice generates high tax revenue and “0” otherwise.

Empirically the logistic regression express as:

Y (probability) = Tax revenue.

$$Y = \begin{cases} 1 & \text{if tax audit practice generate high revenue} \\ 0 & \text{otherwise} \end{cases}$$

$$p_i = E\left(y = 1/x\right) = \frac{1}{1+e^{-(\alpha+\beta_1x_1+\beta_2x_2+\dots+\beta_nx_n+\varepsilon_i)}}$$

P: is the probability of tax audit practice generate high revenue given by $p = \frac{1}{1+e^{-z}}$

1-p: is the probability of tax audit practice not generate revenue given by $1 - p = \frac{1}{1+e^z}$

Z: is the linear combination and is given by $= \alpha + \beta_1x_1 + \beta_2x_2 + \dots + \beta_nx_n + \varepsilon_i$

β : is refers to the coefficient of the parameter.

$x_1 \dots x_n$ Are independent variables.

ε_i : is disturbance error term. There for

$$\text{Odds (event)} \quad \frac{p}{1-p} = \frac{1+e^z}{1+e^{-z}} \dots\dots\dots 1$$

Since p is the probability generating high tax revenue, not directly observable, a dichotomous (0,1) variable constructed, it takes the value of “1” when tax audit generate performs high revenue and “0” otherwise. i.e.

$y_i = 1$ with the probability of p

$y_i = 0$ with the probability of 1-p

Then from logistic probability equation (1) the following regression equation was derived

$$\text{Logit}(p_i) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_nx_n + \varepsilon_i \dots\dots\dots 2$$

The equation that account for individual explanatory variables specified for this particular study is given as follows. Accordingly, the dependent variables as measured by tax revenue (TR) and the independent variables were measured by logistic regression including, including $X_1 =$ Education level (EL), $X_2 =$ Age of tax payer(AGE), $X_3 =$ knowledge of taxpayer (KT), $X_4 =$ Tax system complicity (TSC), $X_5 =$ Service delivery of tax authority(SDTA), $X_6 =$ Tax audit practice (TAP), $X_7 =$ Social and Economic instability(SEI), $X_8 =$ Tax payer personal and financial ability(TPPFA) and $X_9 =$ Tax fairness (TF).

$$\text{TR} = \text{Log}\left(\frac{p}{1-p}\right) = \ln(\text{odds}) = \alpha + \beta_1\text{EL} + \beta_2\text{GTP} + \beta_3 \text{INFA} + \beta_4 \text{TSC} + \beta_5\text{SDTA} + \beta_6\text{TAP} + \beta_7\text{TF} + \beta_8\text{SEI} + \beta_9\text{TPPFA} + \varepsilon_i \dots\dots\dots 3$$

3.11. Measurement of Variables and Expected outcomes

Dependent variable

TR = 1 if high tax revenue and “0” otherwise

Table 3. 2: Independent variable and their measurement

Variable	Symbol	Measurement	Expected sign
Education level	EL	Level of education attained	+
Age of tax payer	AGE	It is discrete express in number	+
Service delivery of tax authority	SDTA	Perception of tax payers toward the service	+
Knowledge of taxpayer	KT	1 = if tax payer have knowledge about tax audit. 2 = otherwise	+

Tax system complicity	TSC	1 if complex, 0 otherwise	-
Tax audit practice	TAP	1 if audit practice perform higher revenue, 0 otherwise	+
Tax fairness	TF	1 if fair, 0 otherwise	+
Social and Economic instability	SEI	1 if social & economic instability affects tax revenue and 0 otherwise	-
Tax payer personal and financial ability	TPPFA	1 if tax payer s'personal financial ability affects tax revenue and 0 otherwise	-

Based on the description of the variables, the operational model for the estimation can be formulated as below.

$$TR = f(EL, AGE, SDTA, INFA, TSC, TAP, LTF, SEI, TPPFA)$$

3.12. Econometrics Model Specification Tests

An estimation methodology under certain assumptions is required to estimate coefficients and testing their significance. A test of the validity and reliability of the model and the explanatory variables included in the model is critical step before analysis and drawing implications. Taking into account the varying nature of the cross-sectional data which used, multi-collinearity, heteroskedasticity, goodness of fit and omitted variable problem were checked.

Multi collinearity: is the exercise of linear relationship among some or all explanatory variables of a regression model. When the variables are multi collinear, it is difficult to separate their effects on the dependent variable (TR). The regression coefficients cannot be estimated with great precision. But we can measure its degree in any particular sample detect of multi collinearity was isolated by using the Variance inflation factor (VIF). The Variance Inflation Factor (VIF) quantifies the severity of multi collinearity in regression analysis.

Let R_i^2 denote the coefficient of determination when X_i is regressed on all other predictor variables in the model. It is computed as; $VIF(x_i) = \frac{1}{1-R_i^2}$: for $i=1, 2 \dots p-1$

Where; R^2 is the coefficient of determination in the regression of one explanatory variable (x) on the other explanatory variable (xi).

VIF $i = 1$ when $Ri^2 = 0$, i.e. when i^{th} variable is not linearly related to the other predictor variables. VIF $i \rightarrow \infty$ when $Ri^2 \rightarrow 1$, i.e. when i^{th} variable is linearly related to the other predictor variables. The VIF is an index which measures how much variance of an estimated regression coefficient is increased because of multi collinearity (Gujarati, 2004).

Heteroskedasticity: This assumption tells us that the variance remains constant for all observations. But there are many situations in which this assumption may not hold. For example, the variance of the error term may increase or decrease with the dependent variable or one of the independent variables. Under such circumstances, we have the case of heteroskedasticity. For detection of heteroskedasticity, or to decide presence of heteroskedasticity, white test were used

Goodness-of-fit testing: It is an important element of any analysis used to test whether or not the number of expected events from the logistic regression model reflects the number of observed events in the data. Thus, if our model “fits” in some statistical or scientific sense, then we believe it to be consistent with the hypotheses that went into the model. In this stud goodness of fit test was checked by computing the Homers-Lemeshow goodness-of-fit test. Hosmer–Lemeshow test is a statistical test for goodness of fit for logistic regression models. It is used frequently in risk prediction models. The test assesses whether or not the observed event rates match expected event rates in subgroups of the model population (Hosmer, Hosmer, Le Cessie, & Lemeshow, 1997). In the Homers-Lemeshow goodness-of-fit test p-value > 0.05 implies that well-fitting model.

Omitted variable or specification error: A model specification error can occur when one or more relevant variables are omitted from the model or one or more irrelevant variables are included in the model. If relevant variables are omitted from the model, the common variance they share with included variables may be wrongly attributed to those variables, and the error term is inflated. On the other hand, if irrelevant variables are included in the model, the common variance they share with included variables may be wrongly attributed to them. Model specification errors can substantially affect the estimate of regression coefficients. We call this problem omitted variable bias ([https://www. stats. idre.ucla.edu/stata/webbooks/reg/chapter2/stata-webbooks](https://www.stats.idre.ucla.edu/stata/webbooks/reg/chapter2/stata-webbooks)). For the detection of omitted variable effect run the “*ovtest*” or “*linktest*” command in Stata and in result the p-values of Ramsey Reset test or the value of “*linktest*” was used to decide the presence

of omitted variable bias. In this test P-value of Ramsey Reset test > 0.05 will shows that there is no omitted variable effect.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1. Introduction

This section contains two basic parts, the general characteristics of respondents, analysis and interpretation of data collected from the category “A” and “B” tax payers, to address the research objectives. The general objective of this study was to investigate tax audit practice and its effect on performance of revenue among category “A” and “B” tax payer in Jimma city administration. To achieve the general objective, the research used four specific objectives. All were discussed in line with the basic questions posed under the basic question sixty five (65) sample selected participants those who unable to read and write were supported by data collectors and face to face interviews were used to complete the data. The rest 158 questionnaires distributed for sample households and the entire questionnaires were properly filled and returned. Most of the data gathered were organized in tables and followed by discussions. The discussion of the data analysis was begun with background of the respondents. Finally correlation and regression analysis were performed. In this study, a Binary logistic regression analysis was performed by using all the discrete variables (dependent and independent) variables available in the dataset.

4.2. Socio-Demographic Characteristics of the Respondents

Before discussing the data related to the major items, a summary of socio-demographic characteristic of the respondents was presented below. Description of the socio-demographic characteristics of the target population give some basic information about gender, marital status of taxpayers, types of business, and category of taxpayer. As socio-demographic characteristics of a given population have their own implication and relation with tax audit in the specific town, and they have their direct reflection on the performance of revenue.

4.2.1. Gender of the Respondent

The study revealed that out of 223 sample respondents, 48 (21.32%) of them were female and 175 (78.48%) of them were male, from these respondents 160 responds that audit practice generate

higher revenue and 63 responds that tax audit practice dos not generate higher revenue. This shows that there is awareness difference between tax payers about the importance of tax audit.

Table 4.1: Gender of tax payer

Gender			
Tax revenue	Female	Male	Total
Tax audit practice generate higher revenue	35	125	160
	21.88	78.13	100
Otherwise	13	50	63
	20.63	79.37	100
Total	48	175	223
	21.32	78.48	100

Source: Own survey result, 2020

4.2.2. Marital status of respondents

Table 4.2, indicated that out of 223 respondents 38 (17.04%) percent were divorced, 125 (56.05%) percent were married, 20 (8.97%) percent were widowed and the rest of 40 (17.94%) percent were unmarried (never married and cohabit) regarding marital status of the respondents. The study indicates that the majorities of the respondents were married category.

Table 4.2: Marital status of tax payer

Marital status					
Tax revenue	Married	Unmarried	Divorced	Windowed	Total
Tax audit practice generates higher revenue.	89	24	32	15	160
	55.63	15.00	20.00	9.38	100
Otherwise	36	16	6	5	63
	57.14	25.40	9.52	7.94	100
Total	125	40	38	20	223
	56.05	17.94	17.04	8.97	100

Source: Own survey result, 2020

4.2.3. Types of business

From table 3 Business types of the respondents indicated that the majority of them were 117 (52.47%) service delivery categories. The second largest 46 (20.63%) of the respondents were

manufacturing. The rest respondents 39 (17.49%), 21 (9.42%) and 58 (22.31%) of them were worked in merchandise and others category respectively.

Table 4.3: Types of business

Business type					
Tax revenue	Service delivery	Merchandise	Manufacturing	Others	Total
Tax audit practice generate higher revenue	78	28	35	19	160
	48.75	17.50	21.88	11.88	100
Otherwise	39	11	11	2	63
	61.90	17.46	17.46	3.17	100
Total	117	39	46	21	223
	52.47	17.49	20.63	9.42	100

Source: Own survey result, 2020

4.2.4. Category of tax payer

The study revealed that Out of the 223 target respondents, 157 (70.40%) of them were category “B” tax payer and the rest of 66(29.60%) of them are category “A” tax payer. Therefore, the respondents’ responses show that more than 50% of tax payers are on category “B”.

Table 4.4: Category of Tax payer

Category of Taxpayers’			
Tax revenue	A	B	Total
Tax audit practice enable to generate higher revenue	47	113	160
	29.37	70.63	100
Otherwise	19	44	63
	30.19	69.84	100
Total	66	157	223
	29.60	70.40	100

Source: Own survey result, 2020

4.3. Econometric Analysis

In addition to descriptive analysis econometric model was used to examine tax Audit practice and its effect on performance of revenue on the study area. As the dependent variable has a dichotomous

nature, a binary logistic regression was used where the estimated probabilities lay between logical limits of 0 and 1. In this model the dependent variable is categorized as tax audit practice generates high revenue and not generates higher revenue and the logit model is estimated using maximum likelihood technique. Before rushing to econometric estimation and result display, different econometric assumptions were tested. First Variance Inflation Factor (VIF) was employed to test the presence of multi-collinearity among independent variables. Secondly, the inclusion and exclusion of irrelevant and relevant variables respectively were tested by OV (Omitted Variable) tests. Thirdly, heteroskedasticity problem was tested by whited test and finally goodness of fit test was tested by Hosmer-Lemeshow test for goodness-of-fit.

Test for Heteroskedasticity: In this study white test was used to check the presence of heteroskedasticity. The result of white test shows that there is heteroskedasticity problem in the logit model therefore this problem was cleared by robust standard errors.

Multi-collinearity: multi-collinearity means the existence of a perfect or exact linear relationship among some or all explanatory variables of a regression model. When the variables are multi collinear, it is difficult to separate their effects on the dependent variable. The regression coefficients cannot be estimated with great precision. But we can measure its degree in any particular sample detect of multi collinearity was isolated using the Variance inflation factor (VIF). In this study the results of variance inflation factor (VIF) test confirmed the non-existence of multi-collinearity between the variables i.e. mean VIF = 1.06.

Goodness of fit test: Goodness of fit test was checked by computing the Hosmer-Lemeshow goodness-of-fit used to assess whether the number of expected events from the logistic regression model reflects the number of observed events in the data. Data are commonly grouped into deciles, but other groupings can be used as well. Within each group the expected number of outcomes, sum of predicted probabilities, is compared to the observed number of outcomes. This is evaluated by the following equations;

$$\widehat{HL} = \sum_{i=1}^k \left(\frac{O_i - n_i \bar{P}_i}{n_i \bar{P}_i (1 - \bar{P}_i)} \right)^2 \sim \chi_{k-2}^2 \dots \dots \dots 4$$

Where O_i is the number of observed outcomes, events, in group i , n_i is the number of observations in group i , \bar{P}_i is the average predicted probability in group i , and K is the number of groups ($k, k = 1, 2, \dots, g = 10$). Equation 1 is referred to as the Hosmer-Lemeshow test statistic (HL) which is approximately distributed as a chi-square with $k-2$ degrees of freedom. If the Hosmer-Lemeshow goodness-of-fit test statistics of “P-value” is greater than 5% implies that well-fitting model, if fail to reject the H_0 indicated that there is no difference between observed and model predicted values. Implying that model is estimates fit the data an acceptable level. That is well; fitting model shows non significance on Hosmer and Lemeshow goodness-of-fit test (Hosmer, Lemeshow, & Lemeshow, 1997). Therefore, before going to estimate the logit model, the study undertakes test to check whether the basic assumption of the model is good or not. From the Hosmer-Lemeshow goodness-of-fit test this study result shows that the model is fit i.e.

- Number of observation = 223

- Hosmer- Lemeshow chi2 (8) = 9.55

- Prob > chi2 = 0.2981

OV(Omitted Variable) test: In addition to the above three test the inclusion and exclusion of irrelevant and relevant variables was tested by “*linktest*” with stata command and Ramsey Reset test using the powers of the fitted value of dependent variable. The result of *ovtest* and *linktest* from the Stata show that there is no omitted variable effect in the model.

4.4. Results of explanatory variables from Binary logestic regression models

In logit model, a more meaningful interpretation is in terms of odds and in terms of marginal effects the odds are obtained by taking anti log of the various slope coefficients and marginal effect is the effect on the dependent variable that results from changing on independent variable by a small amount. The result were presented in table 4.5.

Table 4.5: Logit model estimates for tax audit practice and its effect on performance of revenue among category “A” and “B”.

TR	Coef	Robust Std. err	z	P > z	Marginal effect(dy/dx)
Age	.302929	.135854	2.23	0.026	.0505554
EL	.488387	.132395	3.69	0.000	.081506
TSC	-.860297	.378273	-2.27	0.023	-.1435733
TPPFA	.263771	.344979	0.76	0.445	.0440203
SDTA	.545264	.349114	1.56	0.118	.0909981
TF	.860659	.345254	2.49	0.013	.1436338
TA	.274977	.126477	2.17	0.030	.0458904
SEI	-.711072	.352059	-2.02	0.043	-.1186695
TPK	.242744	.118274	2.05	0.040	.0405111
-cons	-3.12173	1.4063	-2.22	0.026	
<ul style="list-style-type: none"> • Number of obs. 223 • log likelihood = -112.4762 • Waldchi2(10) = 35.31 		<ul style="list-style-type: none"> • Prob >chi2 = 0.0001 • Pseudo R2 = 0.1527 • VIF = 1.06 			

Source: Own survey result, 2020

From the above table 4.5, the results show that out of 9 explanatory variables included in the regression five (5) of them have significant and positive at 5% significant level. These include, age (Age), Education level (EL), Tax audit practice (TA), Tax fairness (TF) and Tax payer knowledge (TPK) and two of independent variables, namely Social and Economic instability (SEI) and Tax system complicity (TSC) had negative and significant at 5 % level of significance. However, tax payer personal financial ability (TPPFA) and service delivery of tax authority (SDTA) had no significant effect on performance of revenue among category “A” and “B”.

In this table there are two basic outputs. The first output includes the coefficient and standard errors of logit model and the second output is the output of marginal effects of logit model. The coefficient of logit model does not show marginal effect of independent variable on the variation of the dependent variables; rather it tells as only the sign of each independent variable. On the

other hand, in order to infer the effect of each explanatory variable on the likelihood the marginal effect of each independent variable was taken.

Age (**Age**) of tax payer is positively related with tax audit practice and statistically significant at 5% level. Other thing remains constant as age of tax payers increased by one year the probability of tax audit practice increased by 5.05%. This shows that as age of tax payers increase their willingness to tax audit will increase and it causes positive effect on performance of revenue. In addition this study indicates that higher age group tax payers have more willingness to tax audit than lower age group. The finding is inconsistent with the findings of (Sabin *al et.*, 2017). In addition it is also in line with the studies done by (Dubin and Wilde, 1988), and the study revealed that there is a positive relationship between age and tax compliance.

Education level (**EL**): The logit estimation result reveals that, the effect of education on tax audit is positive and statistically significant at 5% level. Keeping other factors constant, as education of tax payer increase by one level the probability of tax revenue will increase by 8.15%. This shows education is important to create awareness about tax audit, and to generate high revenue in the country economy. Similar results have been obtained by Clifford *al et.*, 2013. The result of his study show that the provision of tax education has influence on the way of taxpayer makes tax compliance decision.

The sign of the coefficient of tax system complicity (**TSC**) revealed a negative relationship with tax audit and it is statistically significant at 5 percent significance level. The marginal effect of this study indicates that as information accesses of tax payer decrease tax system became more complex and it would lead to decrease the performance of revenue by 14.3 percent. This shows that to make the complexity of tax system simple information is important factor because tax payer who get information about tax audit are more probable to audit there business than those who do not have information. This is consistent with the result obtained by (Shaw *et al.*, 2010) which show that tax ccomplexity rise higher administrative and compliance costs and reduce tax revenue. This is also in line with the studies done by (George Drogalas *et al.*, 2015) they relived that high degree of tax law complexity negatively affects tax infringements tracking.

Theoretically the fairness of the tax system is one of the very important aspects of a tax system which determine the behavior of tax payers. If the tax payers perceive the tax system as a fair one, it will be easy for them to comply with it. In this study tax fairness (**TF**) variable have a predictable significant positive sign. This positive relationship indicates that as tax fairness increase the probability of tax audit increase, this cause's a positive effect on performance of revenue. In terms of the marginal effect, it implies that a one percent increase in tax fairness the probability of tax revenue would increase by 14.4%. This show that tax fairness would increase the performance of revenue. According to the respondent response the researcher understand that lack of tax fairness is a cause to reduce tax revenue. This is consistent with the result obtained by Mesele and Tesfahun (2016) they concluded that some of the category "A" and "B" tax payers and many of category "C" tax payers don't agree with fairness in tax assessments this decrease the performance of revenue.

Implication of tax audit (**TA**) on the performance of tax revenue is positive and statistically significant at 5% level. The positive relationship indicates that as tax audit increase the performance of revenue will increase. The marginal effect of tax audit show that a one percent increase in tax audit the probability of getting tax revenue will increased by 3%. This indicates that tax audit is very important factor to generate higher revenue. That in essence means that the more the tax audit conducted the more revenue is collected. Thus, it is right to say that tax audit is directly related to revenue collection. All the tax audits are important because they add something to revenue and thus should be encouraged as it assists the government in collecting appropriate tax revenue. This is also in line with the studies done by Barreca and Ramachandran (2004) they revealed that tax audit helps tax agencies to achieve revenue objectives that ensure the fiscal health of the country and individual states. It derives voluntary compliance and generates additional tax collections, both of which help tax agencies to reduce the tax gap between the taxes due and the amount collected.

The logit estimation result reveals that, the effect of Social and Economic instability (**SEI**) on performance of revenue is negative and statistically significant at 5% level. Keeping other factors constant, as the influence of Social and Economic instability increases the performance of revenue would decrease by 11.86%. This shows that Social and Economic instability inhabit the performance of revenue. Similar results have been obtained by Endale (2019).

Tax payer knowledge (**TPK**) is positively related with tax audit and statistically significant at 5%. Other thing remains constant as tax payer knowledge increased by one level the performance of revenue increased by 4%. This shows tax payer having awareness about tax audit have more willingness to audit there business than who do not having knowledge about the importance of auditing. This shows that tax payer knowledge is an important factor in influencing the performance of revenue. The finding is consistent with the findings of (Kasippilai, 2000) he revealed that tax knowledge is a critical element in a voluntary compliance within tax system. If the taxpayer knows the purpose and how it will be used for the government to intended public expenditures, this improves the amount of tax revenue that collected without compliance cost.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. CONCLUSION

This study was conducted with the objective to investigate tax audit practice and its effect on on revenue in Jimma zone, Jimma city revenue administration among category “A” and “B” tax payers. The study made use of cross sectional survey on 223 tax payers from both category “A” and “B” in Jimma city. Both descriptive statistics and econometric model were employed by the study to meet its objective. As descriptive statistics percentage, frequencies and rates were calculated, and the results are presented using tables. Besides, a binary logistic regression model was employed as an econometric tool to analyse the collected data.

The result from logit regression analysis revealed that tax revenue is significantly influenced by age, education level, tax audit practice, tax fairness, tax payers’ knowledge, social and economic instability and tax system complexity. In addition to this socio-demographic characteristics of the respondent have their own influence on the on revenue and need to be considered when planning the effect of tax audit practice on the performance of revenue. Yet, tax payer personal financial ability and service delivery of tax authority had insignificant effect on revenue in the study area.

The result revealed that revenue was affected by age of tax payers. The coefficient for age is positively significant implying that as age of tax payers increase their willingness to tax audit will increase and it causes positive effect on revenue. Similarly, education level of the respondent were found positively significant in influencing tax revenue in the city. Showing that it is central to create awareness about tax audit, and to generate high revenue. Further, the complexity of tax system were also the challenges in revenue generation in the study area and fairness of tax system is one of the factors that determine the behavior of tax payers and revenue as well. This positive linkage specifies that as tax fairness increase probability of tax audit and revenue. The finding further revealed that social and economic instability limit revenue collection in the study area. Likewise, tax payers having awareness about tax audit have more willingness to audit their business than who do not have knowledge about the importance of auditing. This shows that tax payer knowledge is an important factor in influencing revenue.

5.2. POLICY RECOMMENDATIONS

Based on finding of this study the following policy recommendations were put forwarded by the researchere and believed to improve tax revenue in the study area, Jimma city.

- The revenue authority has to implement pertinent tax laws being faithfull, equitable and faire regardless of their personal status and nature of organization managed. This can be possible through formal way of information distribution and awareness creations.
- Tax payers have lack of awareness regarding tax rules, regulation directives and procedures and directives. This is due to level of awareness is dependent on taxpayers educational background and exposure. To increase the awareness level Jimma City Revenue administration should give great attention to educate communities as well as taxpayers through different techniques like mass-media, preparing broacher and using different structures etc. Besides, audit practice in cooperation with the intelligence agent has to be made properly.
- The revenue authority has to develop an appropriate techniques to increase the audit quality and coverage as this will increase revenue in the study area.

5.3. DIRECTIONS FOR FUTURE RESEARCHS

Tax is very extensive issue and it gos beyond tax audit practice and its effect on performance of revenue in a single city. So further investigation is the task of future study. This study was carried out in Jimma city revenue administration only, and there is still a room to investgate the issue in zonal, regional or national level as well . All tax payesrs from all catagory (category “A”,”B” and “C”) are not fully considerd by this study, hence category extension is the issues of the upcoming researchs in the area. Looking in to the effect of tax audit practice and its effect onperformance of tax revenue can be possible by making use other regression models other than the one employed by the current study(which is binary logestic regressions approach). Hence, applying of different techingque of data analysis might yiled different findings.

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APPENDIX-I

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

1. Questionnaires' for tax payers

Dear Participant

The purpose of this questionnaire is to gather relevant data that will be used in undertaking a study on the topic “*Tax Audit Practice and its Effect on Tax Revenue in Jimma Zone: The Case of Jimma City Administration Revenue Office*” as a partial fulfillments of the requirements for the Masters of Science in Accounting and Finance at Jimma University. Your response is based on your voluntary cooperation and strictly kept confidential and can only be used for completion of the study in the topic stated.

Instruction: Put (X) sign on the box of your choice; multiple answers are possible if it is necessary. For further information, please contact **Fanataye Gebeyehu** by the following contact address directly: Tel.: 09-12-06-47-01

Part I: Questions regarding background information

1. Gender of tax payers: Male _____ Female _____
2. Age of tax payers: 15- 25 year _____ 25-35 year _____ 36-45 year _____
46-60year _____ above 61year _____
3. Marital Status; Married _____ Unmarried _____ Divorced _____ widowed _____
4. Which category of taxpayers is usually audited? (Multiple answers are possible)
Category A _____ Category B _____
Category C _____ All of them _____

Part II: Questions regarding tax audit practice

1. On what type of business you engaged? Service delivery _____ Merchandise business _____
Manufacturing _____ Others _____
2. Duration of stay in current business? Less than 2 year _____ 3-5 year _____
6-10 year _____ Above 10 year _____
3. Highest level of education achieved:
Illiterate _____ Primary school (1 - 8) _____ Secondary education (9-12) _____
College Diploma _____ University degree and above _____
4. What types of Audit are usually performed in Jimma city? (multiple answers are possible)
Desk Audit _____ Registration Audit _____ Fraud investigation _____
Issue audit _____ Refund Audit _____ Comprehensive audit _____
Field Audit _____ Advisory audit _____ others _____
5. When and in what condition the audit type that you have selected in question **No.5** would be conducted, and for how long does the audit cases expected to complete?

6. Do you think that the existing tax law for category “A” and “B” tax payer is clear and easily understandable? Yes _____ No _____
7. If you say “**No**” to question 7 which problems make it complex?
Difficult to calculate _____ Procedural complexity _____
Forms complexity _____ Tax regulation complexity _____
8. What do you think on service delivery of tax authority when you are going to pay the tax liabilities and complain? Good _____ Poor _____
9. Taxpayer’s personal financial ability has an impact on your compliance level. What is your agreement on this? Agree _____ Disagree _____
10. Do you think that your city administration spends the amount of tax collected on capital expenditure for infrastructure like roads, education affect you willingness to voluntarily compliance?
Yes _____ No _____
11. Tick the table below accordingly;

No.	Problems	Yes	No
13.2	Do you think fair tax among similar business in same proximity?		
13.5	Do you think tax auditors detected the suspected report of tax payer and give comments to tax payer for future correction?		
13.6	Do you know what the category “A” and “B” tax payer’s duties & rights?		
13.7	Is that expectation from government expenditure impacted on tax payer willingness to comply on time?		

12. Give your general agreement on the overall tax administration and auditing mechanism of category “A” and “B” tax system (Select the following alternatives as your agreement).

1=if you strongly disagree, 2= if you moderately disagree, 3= if Neutral, 4= if moderately agree, and 5=if strongly agree)

No.	Situation	1	2	3	4	5
14.1	It is unfair to pay tax when governments spends collected amounts of tax for only recurrent expenditure					
14.2	The current Ethiopian tax laws and regulation are easily understandable.					
14.5	Providing necessary information to taxpayers regarding the provision of services and utilization of tax revenues are motivate tax payer					
14.6.	Making the collection procedures simple and transparent encourages the tax payer					
14.8	The business income tax burden imposed upon you is fair					
14.9	Any social and economic instability has negative impact on your business operation					
14.17	If the tax authority disclose all necessary information encourages you to pay					
14.19	The rules and regulation related to income tax are clear and understandable					
14.21	The tax payers knowledge determines the level of tax compliance by reducing complication related to tax issue					

2. Interview Questions for employees of Tax audit and tax audit section head

1. What is the primary purpose of conducting an audit?
2. What type of audit is mostly performed y Jimma city revenue authority? How and in what condition does those types of tax audit performed?

3. Which category of taxpayers and business sectors are usually selected for tax audit? What would be the reason behind this selection?
4. Do you think that taxpayers' are aware of rules, regulations and other information regarding taxes? If they are not aware, what the authority plans to do regarding awareness creation and compliance improvement?
5. Does the tax audit program performed by the city revenue makes its power visible to the community and encourages noncompliant taxpayers to comply?
6. Is there any continuous assessment on competency and knowledge upgrading processes of tax audit staff?
7. Do you believe that city tax authority has currently collecting the potential amount of tax revenue? If yes, how it is achieved? If no, could you tell me the reason behind, and on what audit cases should the city tax authority concentrate in its audit work?
8. What challenges do you faces while you are directing the category "A" and " B" tax payers?
9. What are the problems that hinder the tax administration related with institutional aspects? Not only institutional problems exist, but also the taxpayers related problems that are currently challenging the administration system. So what do you think on that?
10. Do you have any ideas, opinions and suggestions that have not been included in the aforementioned questions?

Thank you for your cooperation!

Appendix II

logit Regression Estimation and Tests

1. Regression result for Tax Audit Practice and its effect on Performance of Revenue

```
. logit TR Age EL TS TPPFA SDTA TF TA SEI TPK
```

```
Iteration 0: log likelihood = -132.75401
Iteration 1: log likelihood = -113.32188
Iteration 2: log likelihood = -112.48048
Iteration 3: log likelihood = -112.47623
Iteration 4: log likelihood = -112.47623
```

```
Logistic regression                Number of obs   =          223
                                   LR chi2(9)         =          40.56
                                   Prob > chi2        =          0.0000
Log likelihood = -112.47623        Pseudo R2      =          0.1527
```

TR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
Age	.3029299	.1407761	2.15	0.031	.0270138	.578846
EL	.4883875	.1488514	3.28	0.001	.1966441	.7801308
TSC	-.8602971	.3777407	-2.28	0.023	-1.600655	-.1199389
TPPFA	.2637714	.3457793	0.76	0.446	-.4139436	.9414864
SDTA	.5452645	.3494106	1.56	0.119	-.1395678	1.230097
TF	.8606596	.3502147	2.46	0.014	.1742514	1.547068
TA	.2749774	.1284557	2.14	0.032	.0232087	.526746
SEI	-.7110723	.3474094	-2.05	0.041	-1.391982	-.0301624
TPK	.242744	.1233778	1.97	0.049	.0009279	.4845602
_cons	-3.121734	1.464476	-2.13	0.033	-5.992054	-.2514136

2. Tests for Multi-collinearity

```
. vif
```

Variable	VIF	1/VIF
SDTA	1.11	0.897033
Age	1.10	0.907771
TS	1.06	0.945211
TA	1.05	0.956229
EL	1.05	0.956627
TF	1.04	0.958980
TPPFA	1.04	0.963177
SEI	1.04	0.964265
TPK	1.02	0.983753
Mean VIF	1.06	

3. Model Specification Tests

```
. ovtest
```

Ramsey RESET test using powers of the fitted values of TR

```
Ho: model has no omitted variables
      F(3, 210) =      1.85
      Prob > F =      0.1389
```

```
. linktest
```

```
Iteration 0: log likelihood = -132.75401
Iteration 1: log likelihood = -112.76311
Iteration 2: log likelihood = -112.1335
Iteration 3: log likelihood = -112.12908
Iteration 4: log likelihood = -112.12908
```

```
Logistic regression                               Number of obs   =      223
                                                    LR chi2(2)      =      41.25
                                                    Prob > chi2     =      0.0000
Log likelihood = -112.12908                       Pseudo R2      =      0.1554
```

TR	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
_hat	1.194091	.3067388	3.89	0.000	.5928942	1.795288
_hatsq	-.1097622	.1312174	-0.84	0.403	-.3669435	.1474192
_cons	.006642	.221144	0.03	0.976	-.4267923	.4400764

4. Test for goodness of fit

```
. estat gof, all group(10) table
```

Logistic model for TR, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.4506	5	7.5	18	15.5	23
2	0.5779	14	11.3	8	10.7	22
3	0.6393	17	13.4	5	8.6	22
4	0.6952	13	15.4	10	7.6	23
5	0.7568	15	16.0	7	6.0	22
6	0.8059	17	17.1	5	4.9	22
7	0.8435	21	19.0	2	4.0	23
8	0.8928	17	19.2	5	2.8	22
9	0.9330	20	20.2	2	1.8	22
10	0.9708	21	21.0	1	1.0	22

```
number of observations =      223
number of groups      =       10
Hosmer-Lemeshow chi2(8) =      9.55
Prob > chi2          =      0.2981
```

5. Heteroskedasticity Test: logit Robust Standard Error Calculation

```
. logit TR Age EL TS TPPFA SDTA TF TA SEI TPK, vce(robust)
```

```
Iteration 0: log pseudolikelihood = -132.75401
Iteration 1: log pseudolikelihood = -113.32188
Iteration 2: log pseudolikelihood = -112.48048
Iteration 3: log pseudolikelihood = -112.47623
Iteration 4: log pseudolikelihood = -112.47623
```

```
Logistic regression                               Number of obs   =       223
                                                    Wald chi2(9)    =       35.31
                                                    Prob > chi2     =       0.0001
Log pseudolikelihood = -112.47623                Pseudo R2      =       0.1527
```

TR	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Age	.3029299	.1358536	2.23	0.026	.0366616	.5691981
EL	.4883875	.1323945	3.69	0.000	.228899	.7478759
TSC	-.8602971	.378273	-2.27	0.023	-1.601699	-.1188957
TPPFA	.2637714	.3449789	0.76	0.445	-.4123747	.9399175
SDTA	.5452645	.3491142	1.56	0.118	-.1389867	1.229516
TF	.8606596	.3452541	2.49	0.013	.183974	1.537345
TA	.2749774	.1264765	2.17	0.030	.027088	.5228667
SEI	-.7110723	.3520598	-2.02	0.043	-1.401097	-.0210477
TPK	.242744	.1182742	2.05	0.040	.0109309	.4745572
_cons	-3.121734	1.406341	-2.22	0.026	-5.878111	-.3653563

6. Marginal Effects after logit Estimation

```
. margin, dydx(*)
```

```
Average marginal effects                               Number of obs   =       223
Model VCE      : Robust
```

```
Expression      : Pr(TR), predict()
dy/dx w.r.t.    : Age EL TSC TPPFA SDTA TF TA SEI TPK
```

	dy/dx	Delta-method Std. Err.	z	P> z	[95% Conf. Interval]	
Age	.0505554	.0217639	2.32	0.020	.0078988	.0932119
EL	.081506	.020496	3.98	0.000	.0413347	.1216773
TSC	-.1435733	.0607886	-2.36	0.018	-.2627168	-.0244298
TPPFA	.0440203	.0574485	0.77	0.444	-.0685767	.1566173
SDTA	.0909981	.057711	1.58	0.115	-.0221133	.2041096
TF	.1436338	.0548926	2.62	0.009	.0360463	.2512213
TA	.0458904	.0204436	2.24	0.025	.0058218	.0859591
SEI	-.1186695	.0562434	-2.11	0.035	-.2289045	-.0084344
TPK	.0405111	.0189638	2.14	0.033	.0033427	.0776795