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**ADDIS ABABA UNIVERSITY  
COLLEGE OF BUSINESS AND ECONOMICS**

**DETERMINANTS OF EFFECTIVE INCOME TAX COLLECTION  
PRACTICE: A CASE STUDY IN NIFAS SILK LAFTO SUB CITY  
REVENUE ADMINISTRATION OFFICE**

**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF  
ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE MASTER OF  
ACCOUNTING AND AUDITING**

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**FEBRUARY, 2025**

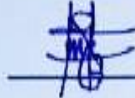
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## DECLARATION

I, AZMERA GETACHEW MEKONNEN, declare that this thesis entitled "Determinants of effective income tax collection practice: A case study in Nifas Silk Lafto Sub City Revenue Administration Office" submitted by me is unique work that hasn't been submitted for consideration for a degree or other title identical to one from another university or institution.

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Assertion of certificate that is to certify that has completed this thesis entitled "Determinants of effective income tax collection practice: A case study in Nifas Silk Lafto Sub City Revenue Administration Office" is her original work done under my supervision. I further certify that the entire thesis represents the independent work of Azmera Getachew and all the research works were undertaken under our supervision and guidance.

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Name

  
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11/03/2025

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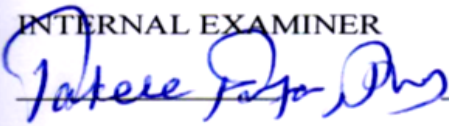


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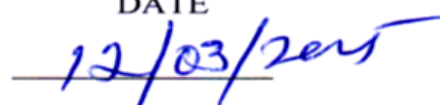
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## **Abstract**

The effective collection of income tax is crucial for the financial sustainability of local governments and the overall economic development of a region. This study investigates the determinants of effective income tax collection practices, focusing on the case of the Nifas Silk Lafto Sub City Revenue Administration Office. Through a comprehensive analysis of factors influencing income tax collection, including taxpayer compliance, complexity of the tax system, administrative efficiency, and enforcement mechanisms, this research aims to provide valuable insights for improving revenue collection strategies. The methodology employed in this study includes a combination of quantitative analysis, qualitative research, and case study approaches. Data was collected through surveys, interviews, and document analysis to assess the current practices and challenges faced by the revenue administration office. The findings of this study shows the complexity of the tax system and other factors such as tax rate, tax knowledge and education, probability of detection, perceptions on the role of the government and peer influence can significantly impact effective income tax collection. The findings highlight the importance of taxpayer education, simplified tax procedures, and effective enforcement measures in enhancing income tax collection efficiency. The results of this study have significant implications for policymakers, tax administrators, and researchers in the field of public finance. By identifying the key determinants of effective income tax collection practices, this research contributes to the development of targeted interventions and policy recommendations to strengthen revenue mobilization efforts in Nifas Silk LaftoSub City and beyond.

**Key words:** complexity of tax system, probability of detection, tax rate, tax evasion

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Background of the Study

To finance certain public expenditures, a government may impose taxes or other levies on individuals or other legal entities as an obligatory financial charge or other type of levy (Charles, 2015). These levies are levied on personal income such as salaries, business earnings, interest, dividends, discounts, or royalties in order to generate money. Julia (2018) defines taxes as fees placed on individuals or corporations and enforced by a government institution, whether local, regional, or national, to fund government functions. In economics, taxes fall on whoever bears the burden of the tax, whether this is the entity being taxed, such as a company, or the end consumers of the business's goods. A compulsory tax is one that a government imposes on its population in order to generate the necessary cash to fund its activities. According to Lymer and Oats (2009), a tax is an obligatory charge that the government or another entity that collects taxes imposes on income, spending, or capital assets without offering the taxpayer any particular advantages.

Ramaswami (2005) identifies the following fundamental features of taxation: mandatory contributions; no expectation of direct benefit; liability; payment for a shared interest; exclusive government levy; element of sacrifice; regular and periodic payment; nondiscrimination among taxpayers; and the ability to impose taxes on a range of taxable items in order to raise revenue. Though taxation is an important tool for economic development, the government must also consider some other principles that are listed in various publications as canons of taxation, such as the following (Ramaswami, 2005), as referenced in Amina (2013).

Nicoleta (2011) categorizes the factors that influence taxpayers' effective income tax collection into two categories: economic factors such as income level, fines, tax rate, audit probabilities, tax benefits, tax audits, and penalties, and non-economic factors such as attitudes toward tax, personal norms, and perceived tax fairness. Furthermore, studies by Kochler (2007), Loo (2006), and Pail (2010) show that factors that affect the effective income tax collection practice of taxpayers can be divided into five major categories: demographic factors like age, gender, and

education; individual tax knowledge; personal financial constraints; and awareness of offenses and penalties; social variables, which include perceptions of equity and fairness of the tax system institutionally; changes in government and finally, economic considerations include tax rates, income levels, tax audits, and opinions of government spending.

Demographic parameters such as age, gender, and education have been extensively studied by various writers. The impact of age on effective income tax collection attitudes varies between studies (Chung and Trivedi, 2003). Hasseldine and Hite (2003) discovered that female taxpayers are more obedient than males. Niway and Wondwossen (2016) also proposed that education level is directly proportional to the likelihood of a compliant attitude. Educated taxpayers are more compliant than uneducated ones.

Tax evasion decisions rely greatly on the taxpayer's personal judgment (Mohani 2001). Personal contextual elements such as tax knowledge, personal financial restraints, and awareness of penalties and crimes are thus expected to have a substantial impact on taxpayer compliance attitudes. Several studies have described the effect of tax awareness on compliance behavior. Previous research has shown that tax knowledge has a strong correlation with a taxpayer's capacity to comply. Singh and Bhupalan (2001), Ermias (2014), Mesfin (2016), Redae (2016), and Sekhon (2016) all found that tax knowledge has a considerable impact on effective income tax collection.

Besides from demographic and individual factors influencing citizens' attitudes toward effective income tax collection, taxpayers' social lives also have an impact on compliance attitudes. To that end, Lemessa (2005) argued that noncompliance is a concern of relationships between people or groups of citizens within local communities, as well as links between states and societies. There is already a social link between the members of the society, and this bond motivates them to comply with the tax. These determinants include attitudes of equity and fairness, shifts in current government policy, and referent groups. The three dimensions of equity, or fairness, that comprise the main design principles of taxation systems are exchange equity, which requires that taxpayers receive an equal share of government public service in exchange for their tax payment, vertical equity, which increases taxes paid in proportion to taxable income or the tax base, and horizontal equity, which states that people in the same income or wealth brackets should pay the same amount of taxes (Richardson, 2006). The

evidence reveals that institutional issues such as the function of the tax authorities, the simplicity of the tax system, and the likelihood of detection all play important roles in compliance decisions. The role of the tax authority in reducing the tax gap and boosting voluntary compliance is clearly critical (Palil, 2010). Richardson (2008) also found that the role of government had a considerable favorable impact on attitudes about taxation. Taxpayers will declare everything if they believe they will be audited in a given year (Rahi-Belkaoui, 2004; Richardson, 2008). Slemrod et al. (2000), who researched the relationship between the likelihood of being audited and taxpayer attitudes, concluded that as the likelihood of discovery grew, taxpayers should be urged to comply with tax regulations and truthfully declare their income.

The effect of the tax rate on effective income tax collection is mixed. Raising marginal tax rates will likely encourage taxpayers to evade taxes more. In their empirical study, Park and Hyu (2003) furthermore discover that the tax rate rise reinforces the motivation to underreport income in order to offset the decrease in revenue. Tanzi's data from another study from 1980 showed that tax rates were adversely connected with effective income tax collection. Tanzi built an econometric model to explain the association between marginal tax rates and noncompliance using aggregate data in the United States. Contrary to this view, some researchers have found a positive relationship between effective income tax collection and the tax rate. In a country where income redistribution is not satisfactory, the higher-income group tends to evade more Mohani, (2001). According to Palil (2010), tax audits could be an important stimulant to increase effective income tax collection. This suggests that income tax collection is influenced by tax audits in a meaningful way. According to Palil et al. (2011), audit rates and the thoroughness of the audits may incentivize taxpayers to file their taxes more carefully, disclose all of their income, and correctly deduct the appropriate amounts to determine their tax burden. Tax audits are beneficial in reducing tax evasion, according to Dubin (2004). The way the government uses its funding will be scrutinised by the public. When public funds are prudently allocated by the government, such as for essential services like public transportation, healthcare, and education, citizens feel satisfied and cooperate; however, when excessive funds are spent on items that the public or taxpayers deem superfluous or unhelpful, citizens feel deceived and try to avoid paying their fair share.

According to Tom and Edris (2021), Examining Ethiopia's tax system, it was shown that although domestic products excise taxes have historically generated a somewhat constant GDP

share (between 0.3% and 0.4%), in 2018–19 this share increased to 0.37% of GDP from 0.33% in 2009–2010. In 2018–19, stamp duty and TOT receipts, which had been consistently hovering around 0.2% of GDP, increased to 0.24% of GDP. Trade tax revenue is mostly derived from import VAT and customs taxes, both of which have decreased recently in relation to GDP. The amount of VAT related to imports and duties was around 1.6% and 1.5% of GDP, respectively, in 2009–2010. The equivalent percentages in 2018–19 were 1.0% and 0.9%. In terms of GDP, these indicate reductions from the preceding ten years, when import VAT was 35% and customs charges were 38%. Additionally, the surtax as a percentage of GDP has been falling; from 0.9% in 2009–10 to 0.5% in 2018–19, there was a 39% relative decline in surtax (Tom and Edris, 2021: 48).

Tax revenues measured as a proportion of GDP in Ethiopia are at the lowest end, around 6.2%. Out of 39 countries in sub-Saharan Africa, Ethiopia ranks 37th (the regional average is 14.1%) in terms of the tax-to-GDP ratio. Among lower-income countries, it ranks 18th out of 19 low-income countries (the income group average is 11.79%). In addition, of the 156 countries in the world, Ethiopia ranks 149th (the world average tax-to-GDP ratio is 16.98% (USAID, 2023)).

## **1.2. Statement of the Problem**

Most taxpayers find it difficult to file their own tax returns accurately, but they also see tax law complexity and ambiguity as reasons of noncompliance (Erich et al. 2006). According to Torgler and Schaffner (2007), complexity can lead to inadvertent noncompliance if taxpayers have difficulty filling the tax form. Furthermore, complexity can lower the moral consequences of noncompliance. Reza et al. (2011) argue that the excess of tax rules, as well as their constant revisions and instability in performance, complicate the tax system and make revenue collection more difficult. According to Torgler (2011), a more legitimate and responsive state appears to be a necessary prerequisite for achieving compliance. According to the conclusions of several experts such as Sritharan, Sahari, and Sharon (2022), Kebede (2018), and Shaukat and Younus (2020), the impacts of the tax system's complexity on compliance are unclear. Different experts arrived at different conclusions about the tax rate. Some found a positive correlation between tax rates and effective income tax collection, while others found a negative correlation. Kirchler, Hoelzl, and Wahl (2008) found that the influence of the tax rate is dependent on the level of trust. When trust is low, a high tax rate may be perceived as unfair treatment of taxpayers. When

trust is high, the same tax rate is viewed as a contribution to the community. Income tax collection reduces when the tax rate rises. As evidenced by the findings of several experts, the impact of tax rates on compliance remains unknown.

The majority of empirical investigations revealed that the likelihood of detection had a positive relationship on the amount of income concealed. According to Palil and Mustapha's (2011) model, penalties and audit probability both have an impact on effective income tax collection. The higher the penalty and possible audit probability, the greater the disincentive for potential tax evasion. Scholars disagree on the influence of fines on tax evasion. Park and Hyun (2003) likewise conclude that a greater penalty rate, along with a higher audit rate, leads to a higher compliance rate. In conclusion, the findings show that there is no clear evidence for each variable punishment and level of compliance; this warrants additional examination.

Logically, taxpayers, particularly Individuals with high tax rates will be worried about how their money is used by the government. If taxpayers think the government is using tax money inefficiently, they may avoid paying taxes, despite the fact that empirical data supporting this claim is scarce. For example, Adimassu and Jerene (2016) found that tax payers' perceptions of government spending have a favorable and significant impact on effective income tax collection. This is also consistent with the findings of Modugu (2014), Desta (2010), Aemiro et al. (2014), and Palil & Mustapha (2011), who indicated that if taxpayers think that the government spends tax money wisely for the growth of a country, their level of effective income tax collection will be enhanced. However, Tadesse and Goitom's (2014) study in Mekele City found that it has no substantial impact on taxpayers' effective income tax collection levels. To enhance voluntary cooperation, the government must spend its money carefully, thoughtfully, and compassionately. This boosts taxpayer confidence in the government. Nonetheless, the findings show that there is no apparent relationship between attitudes about government expenditure and the degree of effective income tax collection, necessitating additional examination.

Chung and Trivedi (2003) conclude that, while friendly persuasion may improve women's tax ethics, it may not have the same effect on men's tax ethics. Influence Viswanath et al. (2003) conclude that the type of information they obtain about their peers' reporting behavior has a major impact on taxpayer compliance with taxes. Torgler (2011) indicates that people's opinions of other citizens' compliance levels have a significant impact on their own propensity to comply.

The basic goal of most educational programs is behavioral change. As a result, behavioral analytical theories of change and learning theories are most suited to explaining how education can influence an individual's behavior. Education alters an individual's behavior by influencing how he or she makes decisions (Denis and Mehila, 2002). It has a considerable favorable effect on individual behavior (Campbell, 2008). There is a positive correlation between taxpayer education and effective voluntary income tax collection (Kassipillai, 2003).

### **1.3. Hypothesis of the Study**

H01. Complexity of tax system will have a significant positive effect on the effective income tax collection.

(Erich et al., 2006), found that most tax payers view tax law uncertainty and complexity as reasons for noncompliance, in addition to the fact that they often find it challenging to accurately submit their own tax returns. Complexity is the primary factor influencing tax evasion, according to Grant (2006), who used data from 45 nations and ordinary least squares (OLS) regression analysis.

H02. Probability of detection will have a significant positive effect on effective income tax collection.

Using information from 355 small- and medium-sized enterprise taxpayers in Accra Metropolis, Bismark (2011) discovered that audit rates and the comprehensiveness of the audits could encourage taxpayers to be more cautious when filling out their tax returns, disclose all income, and claim the appropriate deductions when needed to determine their tax liability.

H03. Tax rate will have a significant positive effect on effective income tax collection.

Park and Hyun (2003) discovered a correlation between tax rate and tax compliance. A higher tax rate causes a decline in tax compliance.

H04. Penalty will have a significant positive effect on effective income tax collection.

Palil and Mustapha (2011) stated that a theoretical fiscal model proved clear that fines and the possibility of an audit had an impact on tax compliance. The likelihood of an audit and the associated penalty both raise the likelihood of potential tax evasion.

H05. Perception on the government spending will have a significant positive effect on effective income tax collection.

Taxpayer's perceptions of government spending have a favorable and large impact on tax compliance, according to research by Adimassu and Jerene (2016). This is also consistent with findings with Modugu (2014), Desta (2010), Aemiro et al. (2014), and Palil & Mustapha (2011), who reported that tax compliance will increase if citizens believe their government is using tax money wisely to support national development.

H06. Attitude of tax evasion will have a significant positive effect on effective income tax collection.

A study was undertaken by Sritharan, Sahari, and Sharon (2022) to investigate the influence of several factors on deliberate non-compliance behaviour, such as tax evasion.

H07. Peer influence group will have a significant positive effect on effective income tax collection.

The type of information taxpayers receive about the reporting practices of their peers has a significant influence on their tax compliance, according to Viswanath et al. (2003). Torgler (2011) asserts that people's perceptions of how others view obedience have a substantial impact on their own inclination to comply.

H08. Tax knowledge and education will have a significant positive effect on effective income tax collection.

Education changes conduct, which in turn affects a person's decision-making process (Denis and Mehila, 2002). It greatly enhances individual behaviour (Campbell, 2008). There is a positive correlation between voluntary tax compliance and taxpayer education (Kassipillai, 2003). By encouraging more positive attitudes and disseminating the tax knowledge necessary to comply with the law, taxpayer education will change attitudes and opinions regarding tax compliance.

## **1.4. Objectives of the Study**

### **1.4.1 General Objective**

The general objective of the study is to examine determinants of effective income tax collection practice: a case study in Nifas Silk Lafto Sub City revenue administration office.

### **1.4.2 Specific Objectives**

The specific objectives of the study are:

1. To examine the effect of complexity of tax system on the effective income tax collection.
2. To investigate the effect of probability of detection on the effectively income tax collection.
3. To examine the effect of tax rate on the effective income tax collection.
4. To evaluate the effect of penalty on the effective income tax collection.
5. To identify the effect of perception on the role of government on the effective income tax collection.
6. To inspect the effect of attitude of tax evasion on the effective income tax collection.
7. To assess the effect of peer influence group on the effective income tax collection.

8. To examine the effect of tax knowledge and education on the effective income tax collection.

### **1.5. Significance of the Study**

This study is crucial because identifying difficulties linked to tax administration efficiency will provide stakeholders in Ethiopia's tax administration, such as tax office branch managers and administrators, with more insight and understanding of the issue. It is intended that these findings would drive efforts to improve income tax collection performance and benefit tax authorities and policymakers.

This study is useful to the government, specifically the Ministry of Revenue, in developing policies related to effective income tax collection because it presents the effect of each variable on effective income tax collection, which can provide additional information for administration officials and policymakers to understand what affects effective income tax collection and take appropriate action.

This study provide practical and theoretical follow-up research issues that can serve as effective study bases for future researchers. The findings of this study will be evaluated as a contribution to the debate over how to increase the performance of income tax collection in the Nifas Silk Lafto Sub City revenue administration office.

### **1.6. Scope of the Study**

This research was primarily focus on examining the determinants of effective income tax collection practice: a case study in the Nifas Silk Lafto Sub-City Revenue Administration Office in Addis Ababa.

Thematically, the study used determinants of effective income tax collection such as the complex nature of the tax code, the likelihood of detection, the tax rate, the penalty, the government's perceived involvement, the attitude towards tax evasion, peer influence groups, and tax education and knowledge. Geographically, the study was limited to taxpayers in the Addis Ababa Nifas Silk Lafto Sub City Small Taxpayer Branch Office.

The study employs a descriptive survey research design and a quantitative research strategy in its methodology. The Nifas Silk Lafto Sub City Small Taxpayer Branch Office's 54,940 tax payers were the study's target group. Using a non-probability sampling approach—more precisely, a convenient sample technique—the respondent tax payers from the three categories from the Nifas Silk Lafto Sub City Small Taxpayer Branch Office were chosen. Using SPSS Version 20, inferential statistical methods like multiple linear regression and Pearson correlation were employed in addition to descriptive statistical tools like frequency, percentage, mean scores, and standard deviation to analyze the respondents' data.

### **1.7. Organization of the Study**

To provide the study's discussion consistency and clarity, it was divided into five chapters. Background information, the problem description, objectives, research questions, significance, and the study's scope make up the initial section of the work. The significance of the study in relation to the body of current literature is covered in the second chapter. The employment of processes and methods in the study is the focus of the third section. A presentation of research methodology and applied data collection strategies will be included in this chapter. The tools for gathering data are also covered, along with the methods for analyzing the data. The study's results are covered in chapter four. To find the relationship between the variables included in the study, the data had been presented statistically. The final chapter is divided into three sections: recommendations, study conclusions, and a review of the key findings. The issue raised in the study's first several chapters is attempted to be resolved in this chapter. The paper's finalizing section included references and supplementary materials.

## CHAPTER TWO

### 2. REVIEW OF THE RELATED LITERATURE

Governments primarily raise public funds through taxes, which enables them to invest in infrastructure, human resources, and the provision of services to both individuals and businesses. One type of tax that governments impose on the income of individuals and businesses under their control is income tax. Income tax collection research indicated that it can be determined by a variety of factors, including tax payer knowledge. Information should be easily available in the languages that service users understand. (Bird, R.M. & Old Man, 1967). In Ethiopia, where understanding and access to information regarding tax concerns are extremely limited, tax payer education has been identified as a critical factor in bringing tax payers on track for compliance.

The organizational power of the tax authority also affects how well income taxes are collected. A study undertaken by Richardson, G. (2008). It was suggested that the role of government had a considerable favorable impact on determining attitudes about taxation. Tax compliance and tax exemptions are two key elements that influence the effective collection of income taxes.

Therefore, the aim of this chapter is to review the literature in the domain of income tax collection. The review consists of three sections. The first section discusses taxation, followed by the second segment, which examines pertinent empirical studies. The final portion of this literature study depicts the conceptual framework.

#### 2.1. Theoretical Review

**Identifying the Research Gap:** The literature review starts by identifying the current corpus of research on income tax collection. This entails analyzing prior research, papers, and publications to determine what has already been explored and where gaps exist in the literature.

**Reviewing Relevant Literature:** This includes literature on taxation, public finance, fiscal policy, and other relevant topics. This entails comprehending the factors that determine tax collecting efficacy, including tax legislation, enforcement procedures, economic conditions, cultural factors, and administrative competence.

**Identifying Potential Determinants:** Using the literature research, I attempted to identify potential variables of effective income tax collection. These may include: - Tax Policy: The framework of the tax system, tax rates, exemptions, and incentives.

**Enforcement Mechanisms:** The effectiveness of tax administration, compliance measures, auditing procedures, and penalties for tax evasion.

**Economic Factors:** include economic growth, employment rates, income distribution, and business cycles.

**Institutional Factors:** include governance quality, political stability, corruption rates, and legal frameworks.

**Socio-cultural Factors:** include attitudes toward taxation, social norms, faith in government, and tax morale.

**Formulating the Hypothesis:** Based on the discovered variables, I develop a hypothesis that expresses the expected link between these determinants and the success of income tax collection.

**Refining the Hypothesis:** using comments from peers, advisors, or preliminary data analysis. This could include describing the relationship's direction (positive or negative) or focusing on certain determinants.

**Testing the Hypothesis:** Once the hypothesis has been developed, I plan empirical research to evaluate it. This entails gathering data, performing statistical analysis, and analyzing the findings to decide whether the hypothesis is supported or rejected.

**Drawing Conclusions:** Based on the empirical findings, I draw conclusions regarding the factors that influence effective income tax collection. These findings add to the corpus of knowledge and offer insights for policymakers and practitioners in taxation and public finance.

### **2.1.1 Overview of Taxation**

To finance certain public expenditures, a government may impose taxes or other levies on individuals or other legal entities as an obligatory financial charge or other type of levy (Charles, 2015). These levies are levied on personal income such as salaries, business profits, interest, dividends, discounts, or royalties in order to generate money. Julia (2018) defines taxes as fees placed on individuals or corporations and enforced by a government institution, whether local, regional, or national, to fund government functions. In economics, taxes are levied on whoever bears the burden of the tax, whether it is the entity being taxed, such as a business, or the end users of the business's products. This is an obligatory tax that a government levies on its citizens to raise the money required to finance its operations. The governing body or another tax-raising agency imposes a compulsory charge on income, expenses, or capital assets; in return, the taxpayer receives capital assets or expenses but nothing else, according to the other academics Lymer and Oats (2009). As per Ramaswami (2005), the essential components of taxation are as follows: obligatory payment, non-discrimination among taxpayers, obligation, payment for a shared interest, imposed exclusively by the government, element of sacrifice, regular and periodic payment, and the power to impose taxes on a range of taxable items in order to raise money. Though taxation is an important tool for economic development, the government must

also consider the following ideas, which have been recognized in various literatures as canons of taxation.

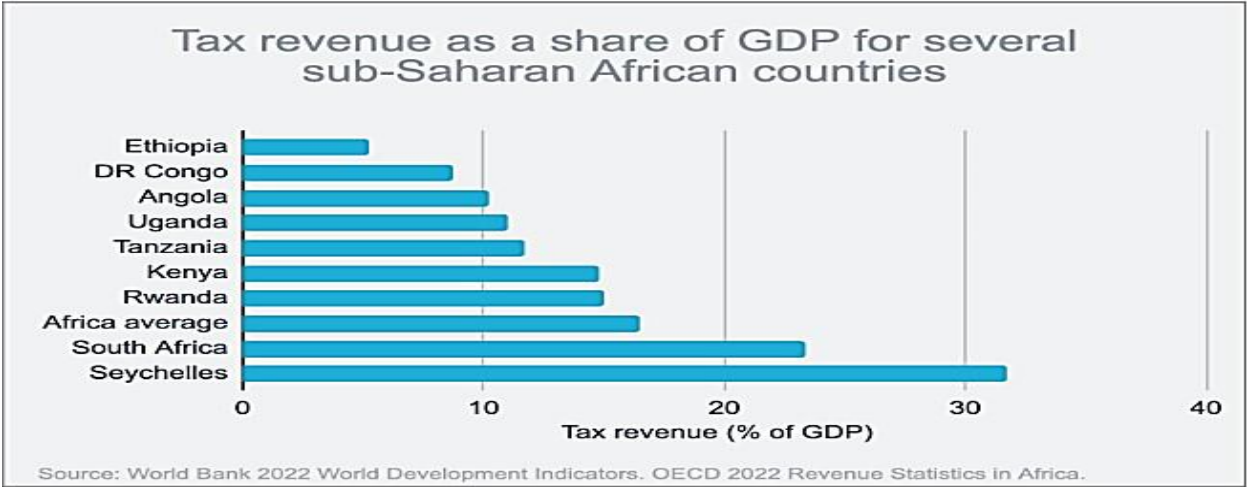
### **2.1.2. Tax Revenue Trend of Ethiopia**

One way to define taxes is as forced, unrequited contributions that people make to the government. Benefits are rarely proportionate to taxes paid since taxes are unrequited. The purpose of taxes is to finance economic infrastructure, property security, government services, and defence expenditures in order to promote social welfare (Tahir, Mekdelawit, and Bizuneh, 2022). The tax revenue is extremely important for the long-term development of both established and emerging economies. Tax revenues make up a sizable portion of the government budget since they finance public goods and services including infrastructure, health care, education, and other social activities that are necessary for society and long-term progress (Macek, 2014). Conversely, developing nations have had several challenges in generating tax money to support their budgets.

To support their budgets and encourage economic growth, rising countries must gradually mobilize their internal resources, which may be mostly accomplished through tax revenue creation. Nonetheless, the bulk of rising economies have struggled with the economic disparity between government income and spending in recent years. The cause is related to the rapid expansion of government spending and low tax collections. Various factors influence the tax income collection process. Income from taxes is influenced by a number of factors, including structural elements (exchange openness, rising prices, income per capita, and agricultural GDP share), policy factors (tax rate and tariff rate), and organisational variables (corruption and governance) (Epaphra & Massawe 2017). In developing nations, large levels of corruption, ineffective institutions, and structural flaws are commonly blamed for the low tax-to-GDP ratio. The greatest tax-to-GDP ratio in the world, according to the Organisation for Economic Cooperation and Development (OECD), was 46.1 percent, while the lowest was 16.1 percent. Across all OECD nations, the average tax-to-GDP ratio was 34.3%. Africa does poorly in terms of tax revenue collection when compared to other OECD nations. The highest and lowest tax revenue-to-GDP ratios, for instance, are found in African nations (34.12% and 6.08%). The average tax income to GDP ratio across all African nations is 16.43% (OECD, 2019).

Sub-Saharan African (SSA) governments have encountered considerable challenges in obtaining tax revenue for public uses. It is challenging to collect taxes in these countries due to a number of factors, including low per capita income, an economy centred on agriculture, a badly designed tax system, and a deficient tax and customs administration. Moreover, low tax revenue collection as a percentage of GDP in these nations is mostly related to institutional quality, with some taxes impacted more than others (Imam & Jacobs, 2014). Furthermore, tax revenue as a percentage of GDP is dropping in many nations, and governments are becoming more reliant on foreign capital inflows for revenue (Kitessa & Jewaria, 2018). Tax income in these countries increased from 9.2 percent of GDP in 2010 to 15 percent in 2015, but fell to 10.2 percent in 2018. (WB, 2018). This is owing to a lack of revenue collection capability, which includes widespread tax exemptions, corruption, and insufficient tax and customs administration capacity.

Ethiopia's government has set long-term goals of eradicating poverty, ensuring long-term economic growth, and reaching middle-income status by 2025. These goals will be impossible to meet unless tax concerns are addressed, tax administration is improved, and adequate revenue is created. Ethiopia's tax income has showed a favorable trend in recent years, but its percentage of GDP remains low, indicating that policymakers should prioritize raising tax collection (Gobachew et al., 2017).



**Figure 1: Tax revenue**

Source, USAID (2023)

The gap between municipal revenue and government spending has grown in recent years. For example, in Ethiopia, the tax revenue-to-GDP ratio was 8.08%, 7.6%, 7.5%, 6.7%, and 6.2% in

2016, 2017, 2018, 2019, 2020, and 2021 (WB, 2018). Ethiopia's tax-to-GDP ratio is low in comparison to the average tax revenue of African countries. This means that the Ethiopian government struggled to collect sufficient tax money (Tahir et al., 2022). The African average tax-to-GDP rate of 16.5% is lower than that of other areas, including Asia-Pacific (19.1%), Latin America and the Caribbean (21.9%), and OECD countries (33.5%). The 2022 study shows that Sub-Saharan Africa takes in much lower tax revenues compared to GDP, with Ethiopia at the bottom end, around 6%.

The According to USAID (2023), Africa's average tax-to-GDP ratio of 16.5% is lower than that of other regions, including Asia and Pacific (19%), Latin America and the Caribbean (21.9%), and OECD countries (33.5%). According to the report's estimations, several Sub-Saharan African countries have much lower tax income than their GDP, with Ethiopia having the lowest at roughly 6.2%.



**Figure 2: GDP Rate**

Source; USAID, (2023)

**2.1.3. Determining Tax Compliance Behavior**

The precise concept of tax compliance has been defined in several ways. According to Torgler and Schneider (2005), tax compliance refers to taxpayers' desire to follow tax regulations to maintain a country's economic equilibrium. Kirchler (2007) proposed a more straightforward definition in which tax compliance is defined as the most neutral term for describing taxpayers' desire to pay their taxes. In administrative terms, compliance entails registering or informing tax authorities of your taxpayer status, completing an annual tax return (if required), and adhering to payment deadlines (Ming Ling, Normala, and Meera, 2005).

Several research in developing nations have addressed various variables of tax compliance, including economic, social, psychological, and cultural issues. Other works of literature, such as Chau & Leung (2009) and Fuest & Riedel (2009), emphasize the need for additional research on tax compliance in developing economies, as referenced by Abdulsemed (2019). Torgler and Schneider (2005) believed that taxpayers were reasonable economic evaders who would weigh the costs and rewards of evasion. On the one hand, they would try to reduce their tax liability, such as by purposefully underreporting their income, and they would benefit from tax breaks if the tax authorities did not catch them. However, if they were detected, they would be willing to pay more, including a penalty.

According to numerous academics, Torgler and Schneider (2005) outlined a number of factors that have affected tax compliance. These variables include, but are not limited to, age, gender, income, and education. According to Chan et al. (2000), those who have completed more schooling are probably more morally developed, have more positive attitudes regarding compliance, and will therefore tend to comply more. Ensuring that taxpayers possess the necessary skills, confidence, and qualifications to fulfill their tax obligations is one way to promote voluntary compliance (Mohani, 2001). In contrast, a recent study by Richardson (2008), reported in Mohd (2010), found a negative relationship between education and compliance. In the case of gender, Hasseldine and Hite (2003) discovered that female taxpayers were more obedient than males. Mohamad Ali et al. (2007) and Palil (2010) similarly found that females were more willing in their studies.

In contrast, Richardson (2006) concluded that gender has no substantial impact on compliance in a study of 45 nations. In a society where income dispersal is unsatisfactory, the higher-income group tends to avoid more (Mohani, 2001) because they may feel misled and unfairly treated. Loo (2006) discovered that high-income earners in Malaysia are more likely to evade taxes, whereas Torgler (2007) showed that lower-income earners in Western Germany were less cooperative. Palil (2010) discovered a substantial positive correlation between income level and tax compliance. Many academics have studied demographic parameters such as age, but their conclusions are inconsistent. In contrast, Palil (2010), Mohani (2001), and Chung & Trivedi (2003) contended that age was positively connected to compliance. Previous research has also shown that the likelihood of being audited, perceptions of government spending, perceptions of equity and fairness of the tax system, penalties, financial constraints, changes in current

government policies, and referral groups (friends, relatives, etc.) are all important factors in assessing tax compliance behavior (Palil, 2010; Troutman, 1993; and Chan et al., 2000).

Nicoleta(2011) divides the factors affecting taxpayer tax compliance into two main groups: (1) non-economic variables like attitudes towards taxes and private customs, while estimating equity for taxation, and (2) economic factors like income level, fines, tax rate, audit probabilities, tax benefits, tax audits, and penalties. Furthermore, factors that influence taxpayers' attitudes towards tax compliance have been studied by Kochler (2007), Loo (2006), and Pavl (2010). These factors fall into five primary categories: demographic factors (such as age, gender, and education); individual tax knowledge; personal financial constraints; and awareness of offences and penalties; and social variables (such as referent groups, institutional changes in government policy, and perceptions of equity and fairness of the tax system).

### **2.1.3.1. Demographic factors**

Many authors have researched societal variables like age, gender, and education in great detail. The influence of age on attitudes towards tax compliance differs between studies. Chung and Trivedi (2003) found a beneficial relationship between taxpayers' opinions towards tax compliance and age. Even so, a number of studies have shown that older people are more obedient than younger ones and that there is no correlation between age and compliance (Porcaro, 1988; Mohani, 2001). A study conducted by Hasseldine and Hite (2003) and Tittle (1980) discovered that female taxpayers were more obedient than males. Contrary to this, Richardson (2006), Amina and Saniiy (2015), and Niway and Wondwossen (2016) concluded that gender has no substantial impact on taxpayer compliance attitudes. The preceding literature demonstrates a strong and beneficial relationship between educational attainment and a willingness to comply with taxes. Additionally, Wondwossen (2016) suggested that there is a direct correlation between education level and the possibility of having a compliant mindset. Taxpayers with higher education tend to be more obedient than those with less education.

### **2.1.3.2. Individual factors**

Tax evasion decisions rely greatly on the taxpayer's own judgment (Mohani, 2001). Personal contextual elements such as tax knowledge, personal financial restraints, and awareness of penalties and crimes are thus expected to have a substantial impact on taxpayer compliance attitudes. Numerous scholarly investigations have delineated the impact of tax knowledge on compliance practices. Prior studies have demonstrated a strong correlation between taxpayers' ability to comply and their tax knowledge (Singh and Bhupalan, 2001). Ermias, (2014), and Mesfin, (2016) came to the conclusion that taxpayers' attitudes towards tax compliance are significantly influenced by their understanding of taxes. A theoretical economic framework has demonstrated persuasively that penalties and audit likelihood affect tax compliance behaviour in terms of awareness of offences and fines. Potential tax evaders get more deterred the higher the penalty and the possibility of an audit. Tax evasion may be less common if people are informed of the crimes they are doing and the consequences of non-compliance (Redae and Sekhon, 2016).

### **2.1.3.3. Social factors**

Taxpayers' attitudes towards tax compliance are not only influenced by their personal characteristics and demographics but also by the social groups they belong to. Lemessa (2005) highlighted that noncompliance issues stem from connections within local communities and broader society. Redae and Sekhon (2016) also noted that society's social ties play a significant role in encouraging individuals to follow tax regulations. The aforementioned components comprise referent groups, legislative changes, and views of equality and fairness. Three perspectives can be used to understand perceptions of equity or fairness, which is one of the main tenets of the design of the tax system: horizontal equity, which states that taxpayers should pay the same amount of taxes regardless of their income or wealth brackets; vertical equity, which states that taxes paid rise in proportion to the tax base or taxable income; and exchange equity, which states that taxpayers should expect the same amount of public service in exchange for their tax payment (Richardson, 2006). The tendency towards tax evasion is also influenced by one's perception of the fairness of the tax system (Jackson and Milliron, 1986; Richardson, 2008). Studies have shown that government actions and policy changes in accordance with the political and economic environment have a substantial impact on taxpayer compliance with regard to changes to present government policies as one element influencing taxpayers' tax compliance attitude. For instance, favourable political developments have a big influence on

attitudes towards compliance. As an illustration, a good government action like raising tax refunds is likely to boost taxpayer compliance (Hasseldine and Hite, 2003).

The attitude of taxpayers towards compliance might be influenced by a referent group. The Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA) postulated that referent groups are important in influencing people's intentions and actions with regard to tax compliance. Family members and friends can have an impact on a person's decision to avoid taxes or not (Redae and Sekhon, 2016). Consequently, referent group influence appears to be significant when making decisions, especially when they concern money and following the law.

#### **2.1.3.4. Institutional factors**

Based on the available data, it appears that institutional elements including the tax authority's role, the ease of the tax system, and the likelihood of detection also have a significant impact on their compliance choices. Palil (2010). It is obvious that the tax authority plays a critical role in reducing the tax gap and promoting voluntary compliance. To reduce tax evasion, tax compliance entails putting the government and the tax authority at the forefront of the parties that must consistently operate the tax system effectively. Furthermore, the Richardson (2008) study revealed that sentiments regarding taxes are significantly positively impacted by the involvement of the government. About how easy the tax system is to use In order to encourage taxpayers to abide by tax law, Amina and Sinay (2015) address the significance of the tax authority having a straightforward tax return and system from the taxpayer's perspective. Also, Redae and Sekhon (2016) reiterated that making tax returns simpler will motivate taxpayers to file them themselves instead of hiring a tax agent, which will lower compliance costs—the primary benefit of SAS. Furthermore, the possibility of being caught during an audit has a big impact on taxpayers' reporting procedures. According to Riahi-Belkaoui (2004) and Richardson (2008), taxpayers will complete all of their reporting if they anticipate being audited in a given year. Alternatively, Slemrod et al. (2000) investigated the connection between taxpayer sentiments and the possibility of an audit. They suggested that when the likelihood of discovery rose, taxpayers should be urged to abide by the law and report their income honestly.

### **2.1.3.5. Economic factors**

Rates of taxes have varying effects on taxpayer compliance. Raising marginal tax rates is expected to increase tax evasion more, according to Redae and Sekhon (2016). In addition, an increase in tax rates boosts the motivation to disclose lower income in order to offset lower income, according to Park and Hyu's (2003) empirical study. Contrary to popular belief, several researchers have discovered a positive correlation between tax rate and tax compliance. When there is inadequate economic redistribution in a nation, the wealthier class tends to avoid more In Mohani (2001). A tax audit may serve as a significant motivator to boost tax compliance, claims Palil (2010). This suggests that tax audits have an impact on tax adherence. Taxpayers may be encouraged to be more cautious when filling out their tax forms, record all income, and claim the appropriate deductions in order to determine their tax liability if audit rates and audit diligence are high enough (Palil et al. 2011). Because tax audits have a disincentive effect on taxpayers who fail to comply, they enhance tax compliance. According to certain research, tax audits reduce tax evasion (Shanmugam, 2003; Dubin, 2004). The things that the government spends tax dollars on will be of interest to the public. Taxpayers feel good about the government's use of their money and comply if it spends it wisely on things like public transportation, health and safety, education, and other necessities. However, if the government spends excessive amounts on things that the public or they deem unnecessary or unbeneficial, they will feel deceived and try to avoid paying their taxes. In general, taxes serve as a means of shifting resources from the private to the public sectors. They also play an important role in stabilising the economy by lowering private demand and freeing up resources for public use. While there are other reasons why governments impose taxes, the primary one is to generate revenue for public spending (Palil, 2010).

### **2.1.4. Factors Affecting Tax Compliance Attitude of Taxpayers**

The research findings of several researchers regarding the factors influencing tax compliance behavior are covered in this section of the study. Empirical data on factors influencing tax compliance come from the Addis Ababa City Administration and sources worldwide. Numerous empirical researches on tax administration and audits in industrialized and emerging nations were looked at. A summary of several scholars' empirical studies is provided in the section below;

#### **2.1.4.1. Complexity of Tax System**

Taxpayers typically view tax law uncertainty and intricacy as reasons for noncompliance with the law, in addition to the fact that they often find it challenging to accurately complete their own tax returns (Erich et al., 2006). Grant (2006) determined that complexity is the primary factor influencing tax evasion by using data from 45 countries and Ordinary Least Squares (OLS) regression analysis. According to Torgler and Schaffner (2007), if taxpayers encounter difficulties completing the tax form, complexity could lead to inadvertent non-compliance. Complicated things might also lessen the moral consequences of breaking the law. According to Reza et al. (2011), the tax system is more complex and hence more difficult to collect taxes because of the abundance of tax laws, the constant alterations made to them, and the unpredictability in their performance. Faith in public servants A substantial positive link was shown by Torgler and Schaffner (2007) between tax compliance and public trust. Torgler (2011) suggests that fostering compliance may necessitate, as a precondition, a more realistic and proactive state. The findings of multiple studies indicate that the effect of the intricacy of the system of taxes on compliance is still unclear. It definitely needs more investigation.

#### **2.1.4.2. Tax Rate**

Researchers that examined the tax rate reached a variety of results. Some researchers found an advantageous association between tax rate and tax compliance, while others found an adverse correlation. Several conclusions can be listed in the following order: The amount of tax payments is influenced by trust levels, according to Kirchler, Hoelzl, and Wahl (2008). Low trust might give rise to the idea that high tax rates unfairly penalise taxpayers. In a setting where trust is strong, the same tax rate can be viewed as a social investment. It has been demonstrated that, in theory, tax compliance rises with tax rate. Based on taxpayer information, Krichler et al. (2007) found that greater tax rates are associated with increased compliance. Conversely, Park and Hyun (2003) discovered an inverse correlation between tax rate and tax compliance. An increased tax rate causes a decline in tax compliance. The results of several researchers demonstrate that the impact of tax rates on compliance is yet unknown. There is no doubt that it merits additional research.

### **2.1.4.3. Probability of Detection**

The majority of empirical studies discovered that the likelihood of being discovered affects the amount of money hidden. Researchers who discovered a result consistent with this conclusion include: Using information from 355 small- and medium-sized enterprise taxpayers in Accra Metropolis, Bismark (2011) discovered that audit rates and the comprehensiveness of the audits could encourage taxpayers to be more cautious when filling out their tax returns, disclose all income, and claim the appropriate deductions when needed to determine their tax liability. Palil, (2010) draws the conclusion that the amount of money that must be declared will increase in proportion to the likelihood of detection. Accordingly, compliance rises as the likelihood of detection does.

### **2.1.4.4. Penalty**

Palil and Mustapha (2011) stated that a theoretical fiscal model proved clear that fines and the possibility of an audit had an impact on tax compliance. The likelihood of an audit and the associated penalty both raise the likelihood of potential tax evasion. Experts differ in their assessments on the effect of fines. Kirchler et al. (2007) analyse the results of numerous experts about the impact of fines on tax compliance and contend that fines should be severe enough to ensure that taxpayers are discouraged from evading taxes and to reduce the expected cost of evasion. On the other hand, if fines are too high, individuals will think the tax system is unjust and unfair, and they would use all legal methods to avoid paying their taxes. Conversely, Park and Hyun (2003) also find that a higher audit rate and fine rate are linked to a greater degree of compliance. The best policy tool for increasing compliance is to penalise unreported revenue severely. In conclusion, the results show that the line separating the punishment from the degree of compliance is not clearly defined; more research is required on this.

#### **2.1.4.5. Attitude perception of Government Spending**

Taxpayers should naturally be concerned about how the authorities spends their earnings, particularly individuals who pay large taxes. Tax evasion is a valid assumption if taxpayers believe that the government is misusing their money, despite the paucity of empirical evidence to support this claim. For instance, the study by Adimassu and Jerene (2016) found that tax payers' perceptions of government spending have a favourable and significant impact on tax compliance. This finding aligns with the findings of Modugu (2014), Desta (2010), Aemiro et al. (2014), and Palil & Mustapha (2011), who reported that tax compliance levels rise when citizens believe that their authority is allocating tax dollars prudently for national development. However, the Mekele City study by Tadesse and Goitom (2014) demonstrates that it has no effect on the increase in tax payers' levels of compliance. Thus, in order to boost voluntary compliance, the government must allocate its funds extremely carefully, sensibly, and wisely. This increases citizens' faith in the government. However, the results show that attitudes, perceptions of expenditure by the government, and tax compliance levels are not clearly differentiated from one another, therefore more research is necessary.

#### **2.1.4.6. Peer Influence**

Chung and Trivedi (2003) suggest that social influence may positively impact women's tax ethics, but it may not have the same impact on men's tax ethics. The type of information taxpayers receive about the reporting practices of their peers has a significant influence on their tax compliance, according to Viswanath et al. (2003). Torgler (2011) asserts that people's perceptions of how others view obedience have a substantial impact on their own inclination to comply.

#### **2.1.4.7. Gender and Age**

The indirect influence of demographic factors on noncompliance possibilities, mindset, and perception—as well as their influence on compliance behaviour itself—is one of the drivers of concern in the Fischer model (Chau and Leung, 2009). (Fischer et al., 1992). In particular, there is a significant correlation between compliance behaviour and age and gender (Hofmann et al., 2017; Jackson and Milliron, 1986). Similar findings were made by Ahmad et al. (2011), who

found that the age and gender of Zakah payers significantly influence their compliance behaviour. Gender has an impact on tax compliance, according to some academics. As per the findings of Kastlunger et al. (2010) and Hofmann (2017), women are generally more likely than men to pay taxes. Previous studies on the relationship between gender (Hofmann et al., 2017; Kastlunger et al., 2010; Walsh, 2012) and tax compliance (Chyz et al., 2019; Hsieh et al., 2018; Kubrick and Lockhart, 2017) have looked at the effect of overconfidence on tax compliance. Research on tax behaviour indicates that women are more likely to assist with truthful disclosure and are less likely than men to evade paying taxes (Hasseldine 2002). Studies on tax compliance also show that men are less likely to file appropriate documentation and are more likely to avoid paying taxes (Kastlunger et al.).

#### **2.1.4.8. Tax Knowledge and Education**

The majority of educational programmes have behaviour modification as their main goal. In this case, theories of behaviour analysis and learning ideas provide the most light on the potential behavioural changes that education may bring about (Svetna and Taumo, 2007). The premise of change theory, which forecasts behavioural changes, is that when behavioural issues emerge, they ought to be caused by modifiable factors. Among the variables that modulate are understanding, mindset, desires, and support from peers, institutional factors, and environmental factors. The hypothesis states that education is important in changing the variables, and taxpayer education is expected to modify this behaviour (Palil, 2010). Education changes conduct, which in turn affects a person's decision-making process (Denis and Mehila, 2002). It greatly enhances individual behaviour (Campbell, 2008). There is a positive correlation between voluntary tax compliance and taxpayer education (Kassipillai, 2003). By encouraging more positive attitudes and disseminating the tax knowledge necessary to comply with the law, taxpayer education will change attitudes and opinions regarding tax compliance. Undergraduate students at the University of Malaysia were asked to investigate, and their answers confirmed this. We assessed the students' compliance attitudes before they took tax courses by using the questionnaires they were given at the beginning of the term. Every response was noted. At the conclusion of the term, a second batch of surveys was distributed to determine compliance views after the participants had learned about taxes. The statistical findings confirmed that taxpayer education and voluntary tax compliance have a substantial favourable link. Similar studies are still needed today because the aforementioned study was conducted more than five years ago in an

environment that is different from Tanzania's, and the sample utilised for the study comprised of university students who weren't actively involved in corporate activities (Palil, 2010).

A study by Lin and Carrol (2000) sought to ascertain how improved tax attitudes and knowledge influenced New Zealand taxpayers' compliance behaviour. There was no discernible correlation between tax compliance behaviour and the analysis of the taxpayers' compliance behaviour following their acquisition of tax knowledge. Since the study's findings were obtained in an environment that was probably different from Tanzania in 2000, a comparable investigation needs to be conducted there. In order to assess the impact of tax expertise on Malaysian taxpayers' tax compliance behaviour, Rasshid and Noor (2004) carried a study. The goal of the investigation was to examine how tax knowledge and comprehension affect the degree of tax compliance behaviour. Comparing the compliance behaviour of taxpayers with a substantial level of tax knowledge with those who lack tax knowledge by analysing the data gathered through the use of questionnaires. Results from statistics showed that people who knew taxes were more compliant than people who didn't. The degree of tax compliance and tax knowledge were found to be strongly correlated by the results. Nonetheless, similar research must be carried out today due to the variations in the study's environment and the fact that it only compared the behaviour of taxpayers with a significant degree of tax competence to those without. It is necessary to determine and consider the relationship between tax compliance levels in the study that will be conducted. Normala (2007) looked on the effectiveness of tax education as a proactive method to boost taxpayers' voluntary tax compliance. Furthermore, a strong relationship between education level and compliance likelihood is suggested by Chan, Troutman, and O'Bryan (2000). Even while educated taxpayers are more likely to be mindful of options for non-compliance, their increased moral development and possible comprehension of the tax code encourage better attitudes and higher compliance rates. Furthermore, taxpayer education and voluntary tax compliance are positively correlated (Kassipillai, 2003). By fostering a positive mindset, taxpayer education will alter their views and beliefs towards tax compliance while imparting the tax information required to stay in line with the law. Furthermore, findings from research on tax awareness and knowledge lend credence to the idea that increased tax awareness will increase voluntary tax compliance. Adimassu & Jerene (2016), Oladipupo & Obazee (2016), Desta (2010), Pambudi et al. (2015), Mehari et al. (2017), and Palil & Mustapha (2011) have also reported these findings. The results, on the other hand, go counter to those of Manchilot

(2018), who claimed that taxpayer awareness had a minimally negative effect on taxpayer compliance. Tadesse and Goitom's (2014) study in Mekele City also revealed that there was no correlation between this variable and the higher tax compliance rates among taxpayers. In conclusion, the results show that there is a blurry line separating tax knowledge from compliance level; more research is necessary on this.

## **2.2. Empirical Review**

All around the world, tax money is the primary source of funding for governments in industrialised, developing, and underdeveloped countries. However, how willingly the public complies with the nation's tax laws determines how much tax revenue a government receives for its budget (Fjeldstad et al., 2012). Most taxpayers cease paying their taxes when they should, in the appropriate amount, at the right time, and in the right place because of negative views. This is accurate despite the fact that tax money is a useful instrument in the government's toolbox for shifting individual purchasing power to the state to fund public spending. They then use a variety of strategies to lower their tax liabilities (Amina & Saniya, 2015).

The unhindered and complete execution of all legal tax obligations is known as tax compliance (Atawodi & Ojeka, 2012). According to Yohannes and Sisay (2009), tax compliance is a major source of public revenue since the state requires a small amount of people's own assets to cover the costs of performing its governmental duties. The more responsibly the state spends public funds, the more acceptable its actions are, according to Fjeldstad et al. (2012).

Tax non-compliance is the term used to describe situations in which taxpayers, whether on purpose or accidentally, fail to fulfil their tax duties (Loo, 2006; Mohani, 2001). According to Kirchler's definition from 2007, non-compliance includes underreporting taxable income, overstating tax exemptions and deductions, and not filing a tax return or paying taxes on time. Due to a lack of a thorough knowledge of the variables influencing tax compliance, Ethiopia has not done well in terms of tax revenue collection (Wollela & Fjeldstad, 2012). For many developing countries, one of the main causes of tax collection hurdles has been tax non-compliance. One of the main reasons for non-compliance, according to Waris (2013), is the public's lack of faith in the government. People in developing nations perceive their government to be dishonest. For this reason, they think their money wouldn't be used in a way that would

actually help the nation (Waris & Abdul, 2014). keeping in mind that tax avoidance may happen in developing nations. Tax laws often require precise tax base reporting, accurate tax liability calculations, prompt return submission, and timely settlement of any outstanding balances. Tax compliance refers to how closely a taxpayer complies with tax laws and regulations. When someone doesn't pay their taxes, on the other hand, that is known as tax noncompliance. It may be due to omission of the tax basis, late filing and payment, or inaccurate liability calculations (Kebede, 2018).

Based on studies carried out in Turkey and Pakistan, it is possible to achieve voluntary tax compliance if mutual confidence is built and the tax authorities exercise their power legally. According to Shawukat and Younus (2020), the results also show that moral obligation, attitude towards taxes, perceived behavioural control, and subjective standards all play a significant role in determining voluntary tax compliance behaviour. According to Silva Freitas et al. (2016), people are more inclined to pay greater taxes when they believe that the money they pay in taxes will be used for community development. However, if they lose confidence in the government or think it is dishonest or unfair, they are less willing to do so.

Norzilah et al. (2016) claim that greater compliance yields larger profits, which can then be used to fund the welfare and development of the country. Palil (2010) asserts that tax compliance results from taxpayers' willingness and capacity to abide by tax regulations, disclose the appropriate amount of income annually, and make timely tax payments. The level of compliance by taxpayers with tax laws and regulations determines the increase or decrease in domestic government revenue. Because of this, it is imperative to take into account and deal with the scenario in which companies or individuals are unable to properly submit their taxes or make on-time payments. If not, tax evasion happens, which lowers the total amount of revenue gathered across the country.

In their research, Yohannis and Zerihun (2013) evaluated the deficiencies and issues at the Dire Dawa tax authority as well as the business community. Although most taxpayers felt that taxes were a good thing overall, their results showed that they were overpaying and had low trust in the authority's staff members or the system's entire tax computation, assessment, and collection processes. Additionally, they contend that the Dire Dawa City Administration's tax authority was totally ineffective in ensuring that the tax process was equitable, open, and clear to taxpayers.

Therefore, they believed that increasing the system's effectiveness and promoting transparency from the tax authority would gradually increase taxpayer trust in the tax system.

Daniel (2017) conducted a study on the factors impacting Arba Minch's voluntary compliance with category "C taxpayers". He found that ignorance had a major role in the taxpayers in category "C" not being in voluntary compliance. The efficiency and efficacy of the tax authority in enhancing the processes of tax assessment and collection, increasing public knowledge, and enforcing tax rules has a favourable effect on taxpayers' voluntary compliance. However, societal factors have the potential to influence taxpayers' attitudes in both positive and bad ways. He argues that political considerations have little influence on taxpayers' opinions in his field of study.

Problems with taxpayers and revenue authorities in Dessie Town were mentioned by Mesele and Tesfahun (2016) in their article. Tax justice and equity, organisational strength of the tax authority, taxpayer knowledge, cultural concerns, and government provision of social services were among the challenges that taxpayers were grappling with, according to the research. But tax officials also had to cope with problems like poor tax payer views regarding the significance of filing taxes, late tax returns from taxpayers, starting a business without a trade licence, and the traditional tax collection approach.

In 2016, Redae Berhe and Shailinder collaborated to look into the perceptions of corporate taxes among Ethiopian taxpayers, with a particular emphasis on the Tigray Regional State. Their investigation's goal was to provide company income tax payers with a thorough understanding of Ethiopian tax rules as they relate to Tigray State. Their inquiry's findings demonstrated that the state's younger, more educated population was establishing their own businesses and working for themselves. Conversely, most taxpayers of company income were unaware of their specific group. Additionally, the results of the study showed that a significant portion of taxpayers had difficulty gathering all the documentation required for their tax obligations because they lacked business understanding. It became difficult for the public to comprehend the nation's tax structure and the region's income collection since the government neglected to raise awareness and increase tax payer knowledge.

In the instance of the Dessie town government, Muleye (2016) examined the climate around tax cheating and the perspectives of taxpayers. Through this investigation, he found that the biggest

barrier to creating a stable long-term basis was a deeply ingrained habit of not paying taxes. Furthermore, the study demonstrated that despite taxpayers' awareness that paying their taxes due is their civic duty, many of them believed that tax evasion constituted a minor offence, leading to a widespread and rising rate of such behaviour. The severity of tax evasion in Dessie is partly linked to conceptions of tax justice, inefficient use of public funds, and the absence of consequences, in addition to the prevailing culture.

In order to empirically assess the major factors influencing tax revenue in East African countries, Kitessa and Jewaria's (2018) study used the panel-based co-integration approach using a dataset that covered the years 1992 to 2015. They discovered that taxable income is affected over time by several variables, such as trade openness, foreign aid, GDP per capita, and the share of services, industry, and agriculture in the economies of East African countries. But inflation, official currency rates, and urbanisation all had a detrimental effect on the region's tax income-to-GDP ratio.

In lower-middle-income nations, Boukbech et al. (2018) examined the variables affecting tax collections. The results show that tax revenues have a significant and positive relationship with government spending, inflation, per capita GDP, and GDP from agriculture. Although not very large, the population growth rate has a detrimental effect. Other research looked at the relationship between tax receipts and literacy rates in 123 nations between 1996 and 2010 using the panel model method. According to their research, there is a connection between lower tax revenues and low literacy. Literacy has a significant impact on tax payments and the approval of taxation levels, which leads to a significant information gap among taxpayers. To understand tax laws, procedures, and obligations, reading and writing skills are essential (Desta et al., 2022).

Small enterprises, like any other business owners, are required to withhold employment income tax when they hire workers to manage their operations, as stated by Waldekidan (2020). Not only that, but small enterprises also have a duty to report self-employment income tax along with their other tax liabilities, including business or rental taxes. In their study, Desta et al. (2022) examined how total tax revenues were affected by institutional variables (corruption and governance), structural variables (per capita income, trade openness, inflation, and agriculture's share of GDP), and policy variables (tax rate and tariff rate). Their regression studies show that two important factors influencing tax collection in Africa are governance and corruption.

The factors that encourage people to engage in tax evasion were examined in the Erstu (2021) study. To be more precise, five criteria were identified by the study in an effort to understand what drives tax evasion: moral obligation, tax fairness, tax knowledge, subjective standards, and taxpayer attitude towards the conduct. The study's findings, as determined by the outcome analysis, are as follows: A correlation analysis conducted on the study's dependent variable, tax evasion, revealed a statistically significant and positive relationship between the independent factors and the variable. Nonetheless, the regression's outcome demonstrates that tax knowledge has a statistically significant impact on taxpayers' inclination to evade taxes. A study was undertaken by Sritharan, Sahari, and Sharon (2022) to investigate the influence of several factors on deliberate non-compliance behaviour, such as tax evasion. Discovering a thorough examination of tax evasion that encompasses global literature remains a challenge. In 2010, the Organisation for Economic Co-operation Development (OECD) adopted the Convention on Mutual Administrative Assistance in Tax Matters with the goal of combating tax evasion through a cooperative network. As a result, starting in 2010, this work attempts to conduct a systematic literature review (SLR) of the 100 papers that have been published in the last ten years. The analysis highlights how previous research has narrowed its focus to examine individual and economic issues, while paying less attention to other variables including corporate social responsibility, the digitization of public services, and whistleblower initiatives. Future academics looking at tax avoidance may find this paper's exhibits useful.

A theoretical review, an empirical review, and a conceptual framework comprise the three elements that make up this chapter. The theoretical review examines the theoretical models of factors that influence the practical application of effective income tax collection, such as the intricacy of the tax code, likelihood of detection, tax rate, penalty, attitude towards tax evasion, peer influence group, age and gender, and tax knowledge and education. Citations for earlier studies pertaining to the study variables are covered in depth in the section on empirical review. The study's conceptualization, which is explored and defined through the construction of a conceptual model that explains the link between dependent and independent variables, is covered in the third section. In summary, the chapter discusses the factors that determine efficient methods for collecting income taxes. This research makes use of the eight variables that were chosen from the five main categories of factors that influence taxpayers' attitudes towards tax

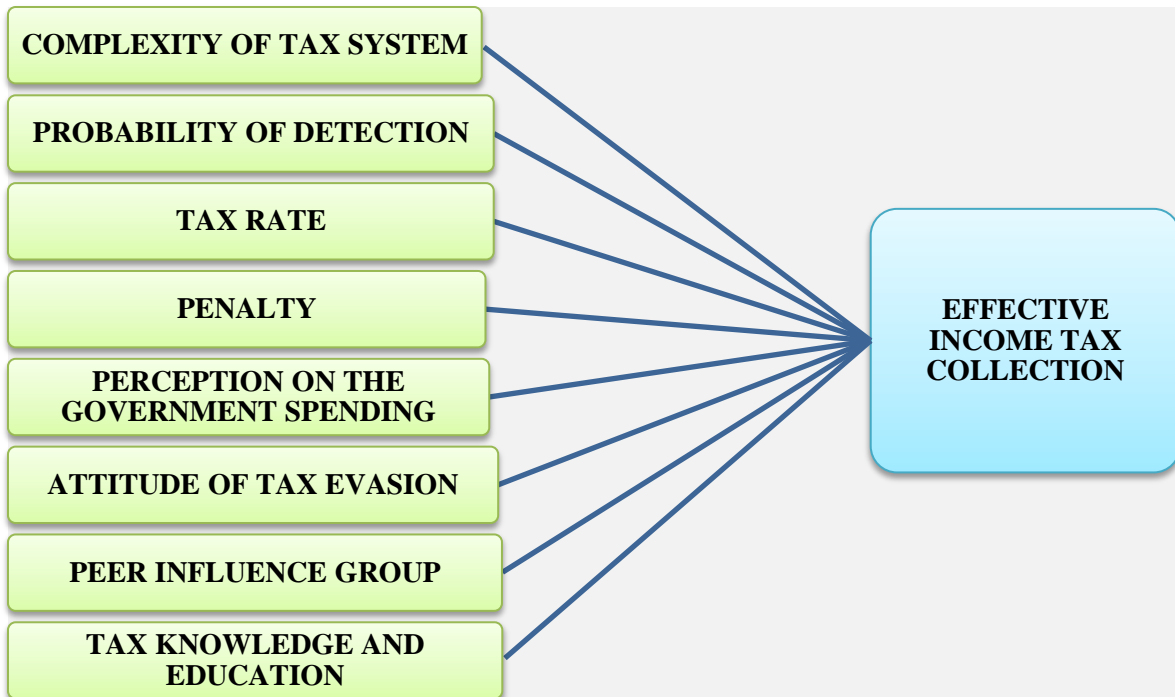
compliance as well as the factors that influence their behaviour in terms of compliance, such as non-economic and economic considerations.

### **2.3. Identification of knowledge gaps**

According to the researcher's knowledge, among several significant previous studies conducted in our country on the determinants of effective income tax collection, the variables that they used had a limited scope, and despite the influence of a few variables, they did not use both factors that affected tax compliance behavior and taxpayer attitudes. This study will use these as the literature gap by identifying and analyzing the determinants of effective income tax collection practice: a case study in the Nifas Silk Lafto Sub City revenue administration office, using selected eight variables from both economic and non-economic factors that affect taxpayers' tax compliance behavior, as well as the five major categories of factors that affect taxpayers' tax compliance practice. This study will look at the primary variables of effective income tax collection, such as the complexity of the tax system, the likelihood of detection, the tax rate, the penalty, the view of the function of government, attitudes toward tax evasion, peer influence groups, and tax knowledge and education.

### **2.4. The Conceptual Framework**

This study's primary goal is to examine “determinants of effective income tax collection practice: a case study in the Nifas Silk Sub City revenue administration office. Generally, the framework is utilised to clarify the relationship between the independent and dependent variables that are being studied. The primary factors of the tax compliance determinants that were selected include the tax system's complexity, detection probability, penalty, perception of the government's role, attitude towards tax evasion, peer influence groups, tax knowledge and education, and tax evasion.



**Figure 3: Conceptual Framework Source: Endashaw, (2019) and Ashenafi, (2023)**

## **CHAPTER THREE**

### **3. RESEARCH METHODOLOGY**

This section of the study provides an overview of the research techniques used. These approaches include picking a particular research strategy, designing studies, gathering data from various sources and types, preparing samples and data sampling techniques, analysing data, and offering appropriate explanations for each technique.

#### **3.1. Research Approach**

Quantitative and qualitative approaches are the two main types of research approaches, which are plans and processes for conducting research. The creation of quantitative data using a quantitative approach is possible, and this data can then be rigorously and strictly submitted to quantitative analysis. In contrast, the qualitative method focusses on the subjective evaluation of attitudes, beliefs, and actions. A quantitative method was used for this investigation.

#### **3.2. Research Design**

The term "research design" describes the overarching plan that can be selected to logically and cogently combine the various study components. According to Cooper and Schindler (2006), it serves as a guide for achieving study goals and providing answers. Three types apply to it: descriptive research, causal or explanatory research, and exploratory research (Saunders, Lewis, & Thorhill 2009). With a case study in the Nifas Silk Lafto Sub City Revenue Administration Office, this study aims to identify the variables that impact effective income tax collecting techniques. To that end, it will employ a descriptive survey research approach. Descriptive survey research aims to clearly and methodically describe a population, circumstance, or phenomenon; hence, it can answer questions about what, where, when, and how, but not why (Glasgow, 2005). A descriptive survey research plan might employ a variety of research approaches to examine one or more variables.

### **3.3. Population and Sample of the Study**

#### **3.3.1. Population of the Study**

The target population of the study will be 54,940 tax payers from the Nifas Silk Lafto Sub City Small Taxpayer Branch Office. Nifas Silk Lafto Sub City Small Taxpayer Branch Office is one of the 15 branch offices of Addis Ababa's Revenues Bureau. Its number of taxpayers is 54,940, with 7,040 "Category A taxpayers," 7,757 "Category B taxpayers," and 40,143 "Category C taxpayers in the Addis Ababa Nifas Silk Lafto Sub City Small Taxpayer Branch Office. As informed by the head of public service and human resource development office of the Nifas Silk Lafto Sub City Small Taxpayer Branch Office, there were 451 workers, among whom 4 cabinet members were, 25 were middle-level management, and the rest were 422 employees.

#### **3.3.2. Sample Size Determination**

The sample size was determined using the following formula and assumptions: As per the formula, the sample size would be the maximum if the study were used.  $P=0.5$  and  $1-P=0.5$ . In an optimum allocation for a fixed sample size, the standard error of a proportion that was taken care of the possible variability for any given value of  $n$  is obtained when  $P$ , the proportion, is between 0.3 and 0.7 (Cochran (2002)). The value arrived at is 0.5, which is within the range given by Cochran. A 95 percent level of confidence with a critical value of  $Z = 1.96$  in a normal probability table and 0.05 precision, including the design effect assumed to be 1.2, was used to tolerate the error in the design of the study. The sample size is calculated as follows:

$$n = \frac{N}{1 + N (0.05)^2}$$

Where  $n$  is the sample size,  $N$  is the population size, and  $e$  is the level of precision. Using this formula, an appropriate sample size was determined. Accordingly, 397 respondent tax payers will be taken as the representative sample size in order to have sufficient and reliable data. For these eligible samples, which were identified from the total population, sample proportion allocation among the three categories of tax payers performed. Therefore, the researcher used the percentage ratio of sample size 397 to target population 54,940 to get the number of participants for questionnaire distribution to each category (Category A, Category B, and Category C). Finally, the number of tax payers participating in each category was determined using population proportionate sampling (PPS).

$$n = \frac{nf * N \text{ in a Addis district}}{N_{\text{total}}}$$

Where, n= Proportion of employees participate in the study in a given district, nf= Final sample size obtained using correction formula (397), N= is the total number of tax payers in Category A, Category B and Category C (54,940) i.e.  $N_{\text{total}}$  = Total number of tax payers in the selected.

**Table 3.1: Population Proportionnait Sampling**

<b>Category</b>	<b>No of Tax Payers</b>	<b>PPS</b>	<b>Sample Size</b>
Category A taxpayers,	7,040	0.13	51
Category B taxpayers	7,757	0.14	56
Category C taxpayers	40,143	0.73	290
<b>Total</b>	<b>54,940</b>		<b>397</b>

Accordingly, the 397 respondent tax payers from the three categories from the Nifas Silk Lafto Sub City Small Taxpayer Branch Office was selected by using a non probability sampling approach, specifically a convenient sampling technique. The convenience sampling technique attempts to obtain a sample of convenient elements. Often, respondents were selected because they happened to be in the right place at the right time. Convenience sampling is the least expensive and least time-consuming of all sampling techniques.

### **3.4. Data Type and Source of Data**

The researcher used primary data for the entire analysis of this study. The information was gathered through a questionnaire from the selected sample of respondents. The data that was collected from the respondents through questionnaires will be used as primary data. According to Biggam (2008), primary data is the information that the researcher finds out by himself or herself regarding a specific topic. The main advantage of this type of data is that it was collected with the research's purpose in mind. It implies that the information resulting from it is more consistent with the research questions and objectives.

### **3.5. Data Gathering Technique and Instruments**

The primary data was gathered particularly using survey questionnaire. A questionnaire, whether it is called a schedule form or measuring instrument, is a formalized set of questions for obtaining information from respondents. Measurements of the determinants of effective income tax collection practice will be adopted and modified from the previous studies, and a five-point Likert scale ranging from 1=Strongly Disagree to 5=Strongly Agree were used.

### **3.6. Method of Data Analysis**

The data was collected, edited, coded, and entered into statistical software (Statistical Package for Social Sciences, SPSS version 20). That involved converting quantitative (nominal and ordinal data) into numerical codes. Descriptive statistics was then run, which consist of frequencies, percentages, means, and standard deviations to summarize the data. The study was adopted multiple linear regression and Pearson correlation analysis to establish the relationship between variables of interest. This was help in establishing the inferential significance of the relationship, direction, and magnitude between variables. Pearson correlation analysis determines if there is a relationship between the variables. This includes the nature, magnitude, and significance of such a relationship. Pearson Correlation analysis was conducted at a 95% confidence level ( $\alpha = 0.05$ ).

### **3.7. Validity and Reliability**

The ultimate goal of any research study is to obtain high-quality, trusted, valid, and reliable results (Yilmaz, 2013). Therefore, researchers should ensure that the adopted research methodology meets the defined standards and criteria. Common criteria that will be used to achieve these standards in research methodology are validity and reliability.

Yilmaz (2013) and Denscombe (2014) described the term „validity as the appropriateness and accuracy of collected data. According to Yilmaz (2013), consistency refers to how well a research instrument assesses a certain variable each time it is utilised under the same circumstances. Irrespective of the mode of data collection, Yin (2014) introduced four validity and reliability tests that are commonly utilised in social science research to maximise project quality. Among the tests were concept validity, internal validity, reliability, and external validity.

### **3.7.1 Construct validity**

Construct validity is the state in which suitable operational measures are determined for the study issue under investigation (Yin, 2014). Yilmaz (2013) asserted that the foundation of this type of validation is the testing of suitable instruments throughout the data collection phase. Ensuring the most rich and accurate information is acquired is ensured by conducting interviews, reviewing academic literature, and thoroughly examining prior records. However, accuracy can be achieved through focusing the application of several techniques and tactics, like referencing multiple sources of support and formulating a series of choices. The construction of a rich chain can be quite beneficial in producing an extensive draft of evidence for further validity evaluations. Construct validity was attained for this study by employing a triangulation of research methods with data from several sources.

### **3.7.2 Internal Validity**

In order to evaluate the gathered data, this criterion assesses how suitable the data analysis methods were. For this reason, it is crucial that the analytical procedures be applied appropriately and that the theoretical claims are correctly connected to the data. In order to establish an appropriate study design and enable the selection of an accurate data analysis technique, a thorough and meticulous assessment of the literature was carried out specifically for this research in order to increase the internal validity. The analysis procedures will be adhered to exactly. Moreover, internal validity was attained by accomplishing all study goals.

### **3.7.3 External Validity**

How well research findings can be applied to other studies or stratified in other contexts is known as external validity. Since generalisation can only happen for theoretical premises, the generalisation of outcomes is applicable to quantitative research. It will be possible to generalise or apply the research's findings to a setting that is comparable to Ethiopia. As a result, the research's findings were extrapolated to other branches in the same nation that are vulnerable to providing the same tax collection services, since the study will focus on the factors that influence the Nifas Silk Lafto Sub City Small Taxpayer Branch Office's abilities in collecting income taxes.

### **3.7.4 Reliability**

In order to replicate the study's process and have the same results, including data gathering processes, the process must be reliable (Yin, 2014). In order to guarantee that the purpose and objectives of the study are accomplished, reliability was attained by choosing and adhering to a suitable research methodological model. A synopsis of the research context was also given to each participant to guarantee uniform comprehension of all questions, thereby enhancing reliability. A reliability test utilising the Cronbach's alpha coefficient was conducted to assess the questionnaire's consistency as well as the general dependability of the constructs it measures. You can think of Cronbach's alpha as a correlation coefficient. The range of its coefficient was between 0 and 1. Acceptable values for the dependability coefficient (alpha) are more than or equal to 0.7. This indicates that the specific questions posed in the questionnaires have the potential to achieve the study's goal.

### **3.8. Ethical Consideration**

The responders' private issues, political and religious beliefs, or ethnic background were never brought up. They didn't want to blow up because these are all aspects of their personal history. In order to protect the respondents under psychological supervision, confidentiality was the researcher's responsibility.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

This chapter covers the findings and the analysis that followed. Sections one through three provide the response rate, reliability analysis, and respondent demographics. The final three sections include correlation analysis, multiple regressions, hypothesis testing, and discussion. To evaluate and interpret the results, both descriptive and inferential statistics are applied. Descriptive statistics are used to interpret the frequency and percentage of the findings, while inferential statistics are used to predict the relationship between the dependent variable of effective income tax collection and the independent variable of factors that influence it, such as pecuniary influence groups, tax knowledge and education, tax rate, penalty, perceived role of government, tax evasion attitude, and complexity of the tax system. In order to ascertain the link between the variables of interest, multiple linear regression and Pearson correlation analysis were employed. Specifically, multiple linear regression analysis is used to determine the relationship between independent and dependent variables.

#### **4.1. Response Rate**

A 99.2% response rate was attained when 381 of the 384 copies of the questionnaires that were given were completed and returned, per the data gathered. This figure is in line with Mugenda & Mugenda's (2003) argument that, given a hypothesis, a response rate of half is suitable for an inquiry, reporting 60% is remarkable, and a response rate of 70% and above is outstanding. 99.9% was therefore unexpected for an examination. The researcher used the drop-and-pick strategy, which entailed selecting the surveys later to give the respondents more time to finish the questions, and pre-announced the potential participants, which may have contributed to the high response rate.

## 4.2. Reliability Analysis

Reliability statistics show that this study's Cronbach's alpha coefficient is 0.951, which is satisfactory. This suggests that a "good" or reliable set of items can be determined by the function of the covariance among the items as well as by the total number of items in the analysis, and that the study's variable of interest was accurately measured by the question design.

**Table 4.1: Reliability Statistics**

Cronbach's Alpha	N of Items
.951	30

**Source:** Own Survey, (2023)

However, in order to evaluate the validity of the tool, an adviser with experience in the field of study evaluated, discussed, revised, and ultimately approved the questionnaire. Before being sent to the respondents, the questionnaire was presented to the research advisor and authorised. Furthermore, in order to address construct validity, the researcher empirically assessed the study measure of the underlying concept of interest as well as other concepts to which it should be tied conceptually.

## 4.3. Demographic Data of the Respondents

The presentation of respondent characteristics is crucial in any given study since it provides insight into the type of respondents that have participated, particularly in terms of their age, gender, and level of education, all of which together represent their comprehension levels.

**Table 4.2: Demographic Data of the Respondents**

<b>Item</b>	<b>Characteristics</b>	<b>Frequenc y</b>	<b>Percentag e</b>
1. Gender	Male	214	56.06
	Female	167	43.94
	Total	381	100
2. Age	21-30	90	23.5
	31-40	198	52
	40-50	75	19.7
	Above 50	19	4.9
	Total	381	100
3. Educational Background	Grade 10 Complete	28	7.3
	Grade 12 complete	50	13.2
	Diploma	25	6.5
	Degree	271	71.2
	Above Degree	7	1.9
	Total	381	100

**Source;** Own Survey, (2023)

Gender, age, and educational background are the demographic characteristics of the respondents that are listed in the table. The majority of respondents—56.06 percent—were male, and the remaining 43.94% were female. Fifty percent of respondents were between the ages of 31 and 40, while 23.3% fell into the second-highest age group—between 21 and 30. Additionally, 19.7% of respondents were found to be between the ages of 41 and 50, and the remaining 4.9% were over 50. Furthermore, the majority of respondents—71.2%—had a bachelor's degree.

In order to guarantee that respondents of all genders are included in this study, the researcher thought it was crucial to consider the respondents' gender distribution. The study's findings indicate that using both genders helped to reduce response bias. The researcher included respondents' educational backgrounds in the analysis with the idea that a respondent's educational background significantly influences how they view the study objectives as expressed in the study questions. Another significant factor that was looked into in this study was the ages of the respondents. The fact that it represents the purpose of all age groups was found to be the most significant factor in determining the respondents' ages.

#### 4.4. Analysis of Descriptive Statistics

The study's mean and standard deviation are shown in the descriptive analysis. The responses of the participants are displayed in this section as a table with descriptive statistics. The responses' mean and standard deviation are shown in the tables. The central tendency of a variable's values can be inferred from the mean value. The purpose of the standard deviation is to provide insight into how much a variable's values deviate from its mean.

The researcher calculated the range as  $(5 - 1 = 4)$  and divided the result by five, as this is the greatest value of the scale ( $4 \div 5 = 0.80$ ), to find the lowest and maximum length of the 5-point Likert scale. If the mean values' range, as evaluated by the Likert scale, is as follows: 1 to 1.80 indicates strongly disagree; 1.81 to 2.60 indicates disagree; 2.61 to 3.40 indicates neutral; 3.41 to 4.20 indicates agree; and 4.21 to 5.00 indicates highly agree.

The mean shows how much the sample population generally agrees or disagrees with the various claims made about the data. The greater the mean, the greater the degree of agreement among the participants with the statement. However, the variability of an observed response from a single sample is indicated by the standard deviation.

**Table 4.3: Descriptive Statistics**

Variables	N	Minimum	Maximum	Mean	Std. Deviation
CTS	381	1.67	5.00	4.0000	.61843
PRD	381	1.67	5.00	3.9606	.66131
OTR	381	1.75	5.00	3.6161	.85367
OPN	381	1.33	5.00	3.7612	.76575
PRG	381	1.67	5.00	3.8058	.75947
ATE	381	1.20	5.00	3.7297	.84311
PIG	381	1.33	5.00	3.7927	.81535
TKE	381	1.33	5.00	3.7069	.74112
ETC	381	1.67	5.00	3.9029	.74195
Valid N (list wise)	381				

**Source:** Own Survey, (2023)

NB: Complexity of Tax System = CTS; Probability of Detection = PRD; Opinion on the Tax Rate = OTR; Opinion on the Penalty = OPN; Perception on the Government Spending = PRG; Attitude of Tax Evasion = ATE; Peer Influence Group = PIG; Tax Knowledge and Education = TKE; Effective Income Tax Collection = ETC

According to the descriptive statistical results, the range of 3.71 to 4.00 is where the mean scores of the statements of the dependent variable—effective income tax collection—and the multiple independent variables—complexity of the tax system, probability of detection, tax rate, penalty, perceived role of the government, attitude towards tax evasion, peer influence group, and tax knowledge and education—fall. The mean value for Complexity of tax system is 4.00, for the Probability of detection is 3.96, for the Tax rate is 3.61, for the Penalty is 3.76, for the perceived on the role of government is 3.80, for the Attitude of tax evasion 3.73, for the Peer influence group is 3.79 and for the tax knowledge and education is 3.90. A great deal of respondents concur with assertions made about the research variable, according to the observed data.

## **4.5. Inferential Statistics**

### **4.5.1. Correlation Analysis and Hypothesis Testing**

This Pearson's correlation coefficient test statistic quantifies the statistical linkage, or relationship, between two continuous variables. In order to measure the relationship between variables of interest, the covariance method is thought to be the most effective way. Information about the strength of the association, or correlation, is provided in addition to the link's direction. Various independent variables can impact the effectiveness of income tax collection, including the intricacy of the tax system, probability of detection, tax rate, penalty, government's perceived role, attitude towards tax evasion, peer influence group, and tax knowledge and education. The degree of association between these variables and the dependent variable in this study, effective income tax collection, was ascertained using a Pearson correlation test.

To support or refute the alternative hypothesis, the researcher employed the same test. Mac Eachron (1982) created the following measure of association, known as the degree of correlation: Perfect correlation occurs when there is a value that falls between  $\pm 0.80$  and  $\pm 1$ . This indicates that as one variable increases, the other variable tends to follow suit, either positively or negatively; high degree correlations occur when the coefficient value falls between  $\pm 0.60$  and  $\pm 0.80$ , indicating a strong correlation; moderate degree correlations occur when the value falls between  $\pm 0.40$  and  $\pm 0.60$ , indicating a medium correlation; low degree correlations occur when the value falls between  $\pm 0.20$  and  $\pm 0.40$ .

**Table 4.4: Correlations**

		CTS	PRD	OTR	OPN	PRG	ATE	PIG	TKE	ETC
CTS	Pearson Correlation	1								
	Sig. (2-tailed)									
	N	381								
PRD	Pearson Correlation	.499**	1							
	Sig. (2-tailed)	.000								
	N	381	381							
OTR	Pearson Correlation	.552**	.651**	1						
	Sig. (2-tailed)	.000	.000							
	N	381	381	381						
OPN	Pearson Correlation	.434**	.665**	.748**	1					
	Sig. (2-tailed)	.000	.000	.000						
	N	381	381	381	381					
PRG	Pearson Correlation	.661**	.605**	.718**	.654**	1				
	Sig. (2-tailed)	.000	.000	.000	.000					
	N	381	381	381	381	381				
ATE	Pearson Correlation	.579**	.672**	.792**	.712**	.785**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000				
	N	381	381	381	381	381	381			
PIG	Pearson Correlation	.578**	.546**	.705**	.516**	.697**	.805**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000			
	N	381	381	381	381	381	381	381		
TKE	Pearson Correlation	.584**	.556**	.736**	.590**	.750**	.839**	.856**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		
	N	381	381	381	381	381	381	381	381	
ETC	Pearson Correlation	.616**	.749**	.649**	.650**	.694**	.755**	.652**	.626**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	
	N	381	381	381	381	381	381	381	381	381

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

**Source:** Own Survey, (2023)

From the above correlation matrix, the researcher found the following results under each construct, supported by their related empirical evidence:

**Correlation between Complexity of tax system and effectively income tax collection**

A positive connection was found at the significance level of (R =.616\*\*) (P<0.01) in the Pearson correlation test between the dependent variable, effective income tax collection, and the independent variable, complexity of the tax system. The magnitudes of the relationship between

the two variables are strong and compared to other relationship variables considered in this study, complexity of tax system is the eighth highly correlated variable with effective income tax collection.

H1: There is a significant positive relationship between complexity of tax system and effective income tax collection.

Effective income tax collection, the dependent variable, and the independent variable, tax system complexity, are positively correlated, according to the results of the Pearson correlation. Thus, we agree with H1, the first alternative hypothesis.

We fail to reject the null hypothesis not accept the alternative hypothesis. Hypothesis test result should be based on the multiple regression (presented below), not correlation

### **Correlation between probability of detection and effectively income tax collection**

An analysis of the relationship between the dependent variable, effective income tax collection, and the independent variable, probability of detection, was done using a Pearson correlation test. According to the study's findings, the two variables exhibit a significant positive association at the level of ( $R = 0.749^{**}$ ) ( $P < 0.01$ ). In comparison to other connection factors examined in this study, the probability of detection is the second most linked variable with effective income tax collection. The magnitudes of the association between the two variables are strong.

H2: There is a significant positive relationship between probability of detection and effective income tax collection.

The result of the study showed that effective income tax collection and the independent variable probability of detection have a positive association, and hence we accept the second hypothesis H2.

### **Correlation between Tax rate and effectively income tax collection**

Pearson correlation analysis revealed a statistically significant positive relationship between effective income tax collection and tax rate at the levels of ( $P < 0.01$ ) and ( $R = 0.649^{**}$ ). Compared to other connection factors analysed, the tax rate has an exceptionally high degree of correlation and is found to be the sixth closely related variable with effective income tax collection.

H3: There is a significant positive relationship between the tax rate and effective income tax collection.

The researcher's initial hypothesis was that there would be a significant positive correlation between the predictor tax rate and the anticipated variable, which is effective income tax

collection. Because the study's findings confirmed the third hypothesis, or H3, we decided to accept it.

### **Correlation between Penalty and Effective Income Tax Collection**

Using the independent constructs that have been observed thus far, the Pearson correlation result between the predictor variable of penalty and the predicted variable of effective income tax collection indicates that there is a strong positive relationship between the two variables at a statistical level of ( $r = 0.650^{**}$ ) ( $p < 0.01$ ). The penalty stands out as the sixth strongly linked variable with effective income tax collection when compared to the other connection factors examined in this study.

Based on the correlation magnitude tables provided by MacEachron (1982), it can be deduced that there was a significant degree of link between the two variables, namely the penalty and effective income tax collection.

H4: There is a significant positive relationship between penalties and effective income tax collection.

It was demonstrated that the fourth hypothesis—that the effective income tax collection and the penalty are positively correlated—is true using the data from the Pearson correlation test thus far. This means that H4 is permitted..

### **The correlation between the role of government and effective income tax collection**

As for how much the dependent variable—effective income tax collection—correlated with the independent variable, a Pearson correlation test was performed, exactly as usual. Perceived on the role of government, which was considered under this study the fifth construct variable.

Consequently, the study's test result demonstrated that, at a significance level of ( $R = 0.694^{**}$ ) ( $P < 0.01$ ), there is a positive link between the two variables. It was evident from the strength of the association between the two variables how closely they were related. Perceived government function is the third highly associated variable in this study, based on the independent constructs that have been observed thus far.

H5: There is a significant positive relationship between perceptions of the role of government and effective income tax collection.

Using the correlation result between the predictor variable of the perceived function of the government and the predicted variable of effective income tax collection, we were able to demonstrate that there is a positive relationship between the two, leading us to accept hypothesis H5.

### **Correlation between attitude of tax evasion and effective income tax collection**

The sixth construct variable under investigation, attitude towards tax evasion, was the independent variable. As per normal, a Pearson correlation test was used to determine the degree of relationship between the independent and dependent variables.

In light of this, the study's test result demonstrated that, at a significance level of ( $R = 0.755^{**}$ ) ( $P < 0.01$ ), there is a positive link between the two variables. It is the first most strongly correlated variable in this study based on the strength of the association between the two variables, which was much stronger than other independent constructs.

H6: There is a significant positive relationship between attitude toward tax evasion and effective income tax collection.

Equipped with the correlation outcome derived from the anticipated variable of tax evasion mindset and the predictor variable of effective income tax collection, we demonstrated that a positive association exists between both, leading us to accept hypothesis H6.

### **Correlation between peer influence groups and effective income tax collection**

To determine the strength of the relationship between the dependent variables, a Pearson correlation test was performed as per normal. Efficient revenue collection for income taxes and the independent variable Peer influence group was regarded as this study's eighth construct variable..

As a consequence, at a level of ( $R = 0.652^{**}$ ) ( $P < 0.01$ ), the test result of the investigation demonstrated a substantial positive link between the two variables. It is the fourth highly correlated variable in this study based on the strength of the association between the two variables, which was significant when compared to independent constructs.

H7: Effective income tax collection and peer influence groups have a strong favourable association.

We were able to demonstrate a positive association between the predicted variable of peer influence group and the predictor variable of effective income tax collection by using the correlation result that we had gotten. As a result, we were able to accept hypothesis H7.

### **The correlation between tax knowledge and education and effective income tax collection**

As is customary, a Pearson correlation analysis was performed to determine the strength of the relationship between the dependent variable, effective income tax collection, and the

independent variable, tax knowledge and education, which was considered the eighth construct variable under this study.

Thus, the study's test result demonstrated that, at a significance level of ( $R = 0.626^{**}$ ) ( $P < 0.01$ ), there is a positive link between the two variables. The correlation between the two variables was substantial when compared to independent constructs, making it the seventh strongly correlated variable in this study.

H8: There is a significant positive relationship between tax knowledge, education, and effective income tax collection.

We validated the hypothesis, H8, by demonstrating a beneficial relationship between the predictor variable of effective income tax collection and the predicted variables of tax knowledge and education, as indicated by the correlation result.

Finally, a statement regarding the link and tested hypothesis.

In order to determine how strongly each construct correlated with the dependent variable of effective income tax collection, the researcher took into account eight components. Accordingly, the Pearson correlation test shows a beneficial correlation between all the independent variable's elements and effective income tax collection; hence, all of the hypotheses were also approved.

#### **4.5.2. Basic Assumptions**

Depending on how many variables are involved, one can either do a basic linear regression with one dependent and one independent variable or multiple regressions with one dependent and two or more independent variables to see the linear relationship). The present investigation employed linear multiple regressions to investigate the impact of the factors that dictate effective income tax collection (i.e., tax system complexity, detection probability, tax rate, penalty, government's perceived role, tax evasion attitude, peer influence group, and tax knowledge and education) on the dependent variable, which is effective income tax collection. Therefore, in order to create the regression line formula, the following are the denoted dependent and independent variables: X1 = tax system complexity; X2 = probability of detection; X3 = tax rate; X4 = penalty; X5 = perceived role of government; X6 = attitude of tax evasion; X7 = peer influence group; and X8 = tax intelligence and education. Y = Effective revenue from income taxes. The investigator tested the fundamental presumptions that must hold true for multiple regression to be performed on SPSS; otherwise, the study would not have been conceivable.

**Assumption 1: Independent of residuals**

For a linear regression analysis, the data should have little to no autocorrelation. When the residuals are not independent from one another, autocorrelation happens. Stated otherwise, in situations where  $y(x+1)$  does not follow  $y(x)$ , In the case of employees' motivation variables, for example, this usually happens when the factors that determine effective income tax collection (i.e., tax system complexity, likelihood of detection, tax rate, penalty, government role perception, tax evasion attitude, peer influence group, and tax knowledge and education) are not unrelated to the motivation of the previous employees. When the value is 2.0, the sample is considered to be autocorrelation-free. Positive autocorrelation is represented by values between zero and 2.0, and negative autocorrelation is represented by values between 2.0 and 4.0 (Chatterjee & Hadi, 2012; Fox, 1997; Weisberg, 2005). If this assumption is not met, the estimate of the regression coefficient is still unbiased but inefficient, and the standard errors and significance are biased. As stated by Matt N, Carlos A, and Deson K (2013), from Chatterjee & Hadi (2012). A test for autocorrelation in the residuals of a statistical regression study is the Durbin-Watson (DW) statistic. There is never a time when the Durbin-Watson statistic is not between 0 and 4. When the value is 2.0, the sample is considered to be autocorrelation-free. Autocorrelation is positive for values between 0 and less than 2, and negative for values between 2 and 4. Durbin-Watson test results for this investigation are displayed in the table below.

**Table 4.5: Durbin-Watson test result Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.848 <sup>a</sup>	.720	.714	.39705	.720	119.363	8	372	.000	2.087
a. Predictors: (Constant), TKE, PRD, CTS, OPN, PRG, OTR, PIG, ATE										
b. Dependent Variable: ETC										

**Source:** Own Survey, (2023)

Durbin-Watson statistics have a range of 0–4. It is generally accepted that residuals are independent (i.e., not correlated) if the Durbin-Watson statistic is approximately 2. A range of 1.50 to 2.50 is an appropriate range, Oguntunde P.E., Babatunde O.S., Ogunmola A.O., and Balogun O.S. (2014).

We assumed that the residuals were independent since the Durbin-Watson in this case is 2.087 and falls within an acceptable range.

Analysing historical data can be problematic if one is unaware of the presence of autocorrelation, also known as serial correlation. A positive autocorrelation would indicate that the independent factors yesterday had a positive correlation with the dependent factor effective income tax collection today so if determinants of effective income tax collection fell yesterday, it is also likely that effective income tax collection fell today. Conversely, the negative autocorrelation has a negative self-reinforcing effect over time, so if determinants of effective income tax collection fell yesterday, there is a greater likelihood that it will rise today.

### **Assumption 2: Multicollinearity**

A perfect or exact link between the regression exploratory variables is referred to as multicollinearity. The assumption behind multiple linear regression analysis is that the exploratory variables do not always have a precise, exact connection. When this premise is broken in regression analysis, multicollinearity is an issue.

The data in multiple linear regressions are assumed to have minimal to no multicollinearity. When the independent variables are not independent of one another, multicollinearity arises.

The absence of correlation between the standard mean error of the dependent variable and the independent variables is a crucial second independence assumption.

We compare multicollinearity to four main standards:

- 1) Pearson's bivariate correlation matrix: The correlation coefficients must be less than 0.8 in order to calculate the matrix of correlations between all independent variables.
  
- 2) Tolerance: The influence of one independent variable on every other independent variable is ascertained using a first linear regression analysis, which is then utilised to compute the tolerance. The tolerance for these first-step regression studies is  $T = 1 - R^2$ . Multicollinearity in the data is certainly present when  $T < 0.01$  and may be present when  $T < 0.1$ .
  
- 3) Variance Inflation Factor (VIF): The formula for the linear regression's variance inflation factor is  $VIF = 1/T$ . In a similar vein, multicollinearity is suggested to exist when  $VIF > 10$ .
  
- 4) Condition Index: Compiling the condition index requires a component analysis of the independent variables. Values between 10 and 30 exhibit moderate multicollinearity in the regression variables, whereas values over 30 exhibit strong multicollinearity.

Putting the data in the centre could be one solution if multicollinearity is discovered. You would only subtract the mean score in order to centre the data. Usually, this is helpful when using non-linear transformations to restore missing multivariate normality since it prevents multicollinearity from creeping into the model.

A factor analysis performed before to the regression analysis and factor rotation to guarantee the factors' independence in the linear regression analysis are two further ways to address the issue of multicollinearity in multiple linear regression.

**Table 4.6: Tolerance and Variance Inflation Factor**

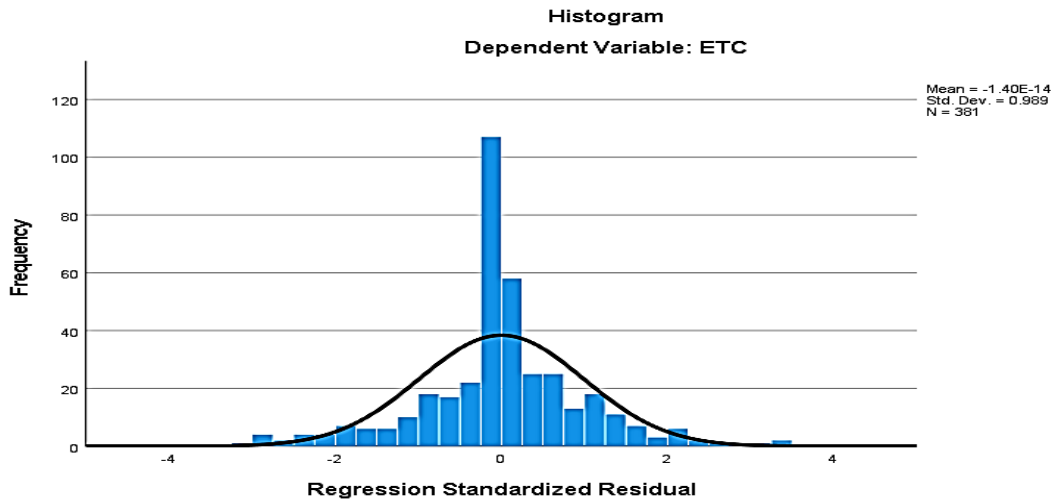
Model		Tolerance	VIF
1	(Constant)		
	CTS	.520	1.921
	PRD	.453	2.207
	OTR	.269	3.720
	OPN	.339	2.953
	PRG	.288	3.468
	ATE	.273	5.769
	PIG	.225	4.438
	TKE	.290	5.250
a. Dependent Variable: ETC			

**Source:** Own Survey, (2023)

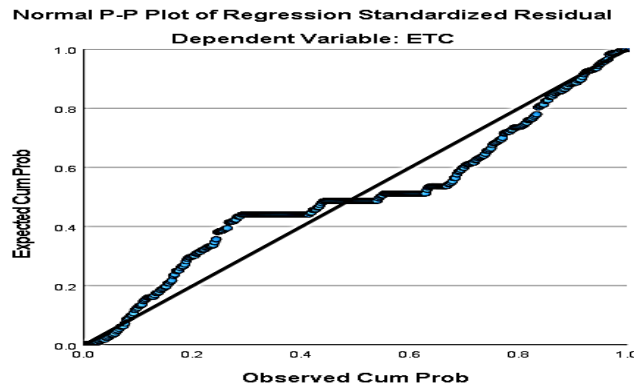
Table 4.6 provides additional evidence that the multi-co-linearity assumption test result is valid, as each variable scale's tolerance values vary from 0.225 to 0.52—both of which are greater than or equal to 0.20. The assumption of no multicollinearity is tenable, as indicated by the VIF values, which ranged from 1.92 to 5.25 and are below 10.

**Assumption 3: Linearity Test and Test of Normality**

The other idea is the linearity assumption. To perform multiple linear regressions, the independent and dependent variables must have a linear relationship. It is also critical to search for outliers since multiple linear regressions are vulnerable to their impacts. To be valid for most parametric tests, the data must be relatively regularly distributed. Between the mean and the middle peak, the normal distribution is symmetrical. Exact regular distribution of data is not necessary for test reliability.



**Figure 4: Linearity Test 1**



**Figure 5: Normal PP Plot**

Source: Own Survey, (2023)

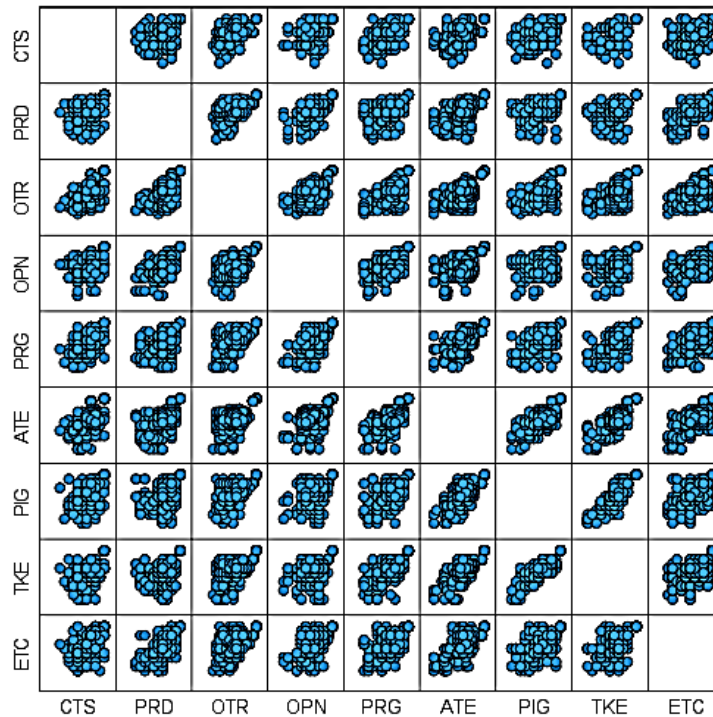
A perfectly smooth normal curve, like the one above, would be exceedingly unlikely to be formed by a histogram of sample data, according to this study's normality histogram. If the data have a middle peak, are generally symmetrical, and are roughly regularly distributed, then the assumption of normality is satisfied.

The p-plot indicates that there is no discernible fluctuation in the residuals' range. When viewed from left to right in the figure, almost all of the residuals seem to reside on the linear straight line. It is instructive that this suggests a linear relationship between the independent and dependent variables.

**Assumption 4: Homoscedasticity (equal variance)**

Although the term heteroscedasticity can be challenging to pronounce, it doesn't have to be a challenging subject to comprehend. Seen in a more straightforward way, heteroscedasticity—also spelt heteroskedasticity—is the situation where the variability of one variable is not equal to the range of values of the second variable that predicts it. It is commonly assumed that the model errors have a finite variance that is constant at all predictor variable levels, although that variance is unknown. According to Weisberg (2005), as referenced by Matt, Carlos, and Deson (2013), this assumption is also referred to as the homogeneity of variance assumption.

It simply indicates that there is a consistent variance of Y in the population for every value of X. Visual inspection of a plot of the standardised residuals (the errors) by the standardised projected value of the regression allows one to verify this assumption. To determine whether homoscedasticity is actually a serious issue in this particular study, a scatter plot was created using the average results of the independent variables representing employees' incentive constructions and the dependent variable quality control of ready-mix.



**Figure 6: Homoscedasticity Variance 1**

Source: Own Survey, (2023)

The scatter plot is approximately rectangular in shape, the points are equally spaced from the line, and the set of data is present on the same scatter, as shown in Diagram 4.2. This indicates

that the sample conforms to the homoscedasticity (i.e., equal variances) assumption. This suggested that the variance of the data would remain the same regardless if they were derived from various samples.

### 4.5.3. Regression Analysis Results

Following the fulfilment of all multiple regression assumptions, the researcher selected the data and proceeded with additional processing. The process of dividing the overall variation into significant components that assess various causes of variation is known as analysis of variance (ANOVA). Stated differently, we divided the entire sum of squares into two categories: "sum of squares between groups (sample)" and "sum of squares within group (sample)." A parametric statistical method for comparing datasets is called analysis of variance (ANOVA). Its use is comparable to that of methods like the t-test and z-test since it compares means and the relative variance between them.

The three most crucial components of the regression output—the model summary, the ANOVA test, and the beta coefficient—were the researcher's primary points of emphasis in this section. The mean response received from income tax collecting clients for each predictor variable, which determines effective income tax collection, and the dependent variable, effective income tax collection Utilised were the tax system's complexity, likelihood of detection, tax rate, penalty, perception of the government's function, tax evasion attitude, peer influence group, and tax knowledge and education.

**Table 4.7: Model summary of the regression result**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.848 <sup>a</sup>	.720	.714	.39705	.720	119.363	8	372	.000	2.087
a. Predictors: (Constant), TKE, PRD, CTS, OPN, PRG, OTR, PIG, ATE										
b. Dependent Variable: ETC										

**Source:** Own Survey, (2023)

The regression model considered effective income tax collection as a dependent variable and determinants of effective income tax collection as an independent variable. A multiple regression analysis is conducted to evaluate how well the eight variables predict the effective income tax collection. As it is depicted in the model summary table, the linear combination of the eight determinants of effective income tax collection variables (complexity of tax system, probability

of detection, tax rate, penalty, perceived role of government, attitude of tax evasion, peer influence group, and tax knowledge and education) is significantly related to effective income tax collection ( $R^2 = 0.720$  and  $P < 0.001$ ). This means that 72.0 percent of the variance of effective income tax collection in the sample can be accounted for by the linear combination of the eight determinants of effective income tax collection variables (complexity of tax system, probability of detection, tax rate, penalty, perceived on the role of government, attitude of tax evasion, peer influence group, and tax knowledge and education).

**Table 4.8: ANOVA on components of determinants of effective income tax collection and effective income tax collection**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	150.539	8	18.817	119.363	.000 <sup>b</sup>
	Residual	58.645	372	.158		
	Total	209.185	380			
a. Dependent Variable: ETC						
b. Predictors: (Constant), TKE, PRD, CTS, OPN, PRG, OTR, PIG, ATE						

**Source:** Own Survey, (2023)

For assessing the mean of a dependent variable across numerous categories of an independent variable, statisticians employ the analysis of variance (ANOVA) test. ANOVA generates results for R and  $R^2$  by utilising an F-statistic to determine the test's significance. Cohen (2010) argues that when a test demonstrates significance and the P-value is less than 0.05, the null hypothesis—which maintains that  $R^2$  equals zero—is rejected and the research hypothesis—which maintains that there is a meaningful relationship between the independent and dependent variables in the population—is accepted. The dependent variable and independent variable constructs have P-values that are significantly below .05 ( $P < 0.05$ ), as seen in the ANOVA table above.

Consequently, based on the feedback we gathered from income tax collection employees, we came to the conclusion that the R and  $R^2$  between the dependent variable effective income tax collection and the independent variables of determinants of effective income tax collection variables are statistically significant (different from zero).

### **Beta Coefficients**

By holding all other predictor variables constant, the values of the unstandardised beta coefficient are used to calculate how much change in the variable being studied might be expected with a one-unit change in the predictor variables for the purpose of producing the linear

regression equation. Each independent variable's relative significance in predicting the dependent variable is ascertained using the standardised beta coefficient.

**Table 4.9: Beta Coefficient of Regression Result**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			
	B	Std. Error	Beta			Zero-order	Partial	Part	
1	(Constant)	.110	.158		.698	.000			
	CTS	.221	.046	.184	4.841	.000	.616	.243	.133
	PRD	.412	.046	.367	8.998	.000	.749	.423	.247
	OTR	.093	.046	.107	2.019	.000	.649	.104	.055
	OPN	.115	.046	.119	2.517	.000	.650	.129	.069
	PRG	.103	.050	.106	2.065	.000	.694	.106	.057
	ATE	.294	.058	.334	5.069	.000	.755	.254	.139
	PIG	.165	.053	.182	3.143	.000	.652	.161	.086
	TKE	.193	.063	.193	3.062	.000	.626	.157	.084

a. Dependent Variable: ETC

Source: Own Survey, (2023)

To determine the relative significance of each independent variable in predicting the dependent variable, the researcher placed a strong emphasis on the values of the unstandardised beta coefficient under the beta coefficient table. This was done in order to create the linear regression equation.

### Standardized Beta Coefficient

For the standardised beta coefficient, another word is the relative important weight. In simple terms, RIWs are the proportionate contribution of each predictor to R<sup>2</sup>, or R<sup>2</sup> = 0.720 in our example, after taking into consideration the impact of the inter-correlations across predictors (Lorenzo-Seva et al., 2010). This strategy is recommended for analysing the relative contributions of each predictor variable to the dependent variable (Johnson, 2000, and 2004).

From table 4.9, we can infer that attitude of tax evasion is found to be the most important determinants of effective income tax collection variable for effectively income tax collection in income tax collection in determining the variation in effective income tax collection, which accounted for 36.4% of the beta coefficient. The second most important independent variable that contributed most to the positive variation in the dependent variable effective income tax

collection is Tax knowledge and education, which accounted for 33.4% of the beta coefficient, followed by CTS, OTR, OPN, PRG, PIG and TKE, which had a beta coefficient share of 18.4%, 10.7%, 11.9%, 10.6%, 18.2% and 19.3% respectively.

### **Unstandardized Beta Coefficient**

This is referred to as the beta weights at times. Pedhazur (1997) states that a  $\beta$  weight coefficient tells us how much of a change in the predictor variables—that is, the complexity of the tax system, probability of detection, tax rate, penalty, perceived role of the government, attitude towards tax evasion, peer influence group, and tax knowledge and education in our case—we might expect with a one-unit change in the criterion variable. All other predictor variables are held constant.

The formula for linear multiple regression can be used to determine the dependent variable, effective income tax collection, as well as various independent variables that influence effective income tax collection, including tax system complexity, Peer influence groups, tax knowledge and education, tax rate, probability of detection, perceived government involvement, attitude towards tax evasion, and penalty.

$$Y' = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e$$

In which case the dependent variable is Y.

A is the constant beta value, or the y axis intercept.

Every independent variable has a beta weight of b1, b2, b3, b4, b5, b6, b7, and b8.

X1, X2, X3, X4, X5, X6, X7, and X8 indicate the tax system's complexity and probability of discovery, tax rate, penalty, and perception of the government's role, tax evasion attitude, peer influence group, and tax knowledge and education.

In our scenario, e = the error term (0.05).

$Y = 0.11 + 0.22X_1 + 0.412X_2 + 0.093X_3 + 0.115X_4 + 0.103X_5 + 0.294X_6 + 0.165X_7 + 0.193X_8 + 0.05$  was the regression equation for this specific study, written to the nearest decimal place, taking into account the unstandardised beta value in the preceding table.

When all independent variables were set to zero, the positive value of the constant intercept simply indicates that the predicted value of the dependent variable, effective income tax collection, was not less than zero.

### **Findings from the equation:**

With all other predictor variables set to zero, the value of the response variable—effective income tax collection—will rise by 22.1% for each unit increase in the tax system's complexity scores.

Effective income tax collection will see a 41.2% rise in value for each unit increase in the product probability of detection in income tax collection, assuming that all other predictor variables are set to zero.

Effective income tax collection will see a 9.3% rise in value for every unit increase in the tax rate, assuming that all other predictor variables are set to zero.

Effective income tax collection will rise by 11.5% for each unit increase in the penalty value in income tax collection, assuming that all other predictor variables are set to zero.

Effective income tax collection will increase by 10.3% for each unit increase in the perceived importance of the government's role in collecting income taxes, assuming that all other predictor variables remain at zero.

The response variable, effective income tax collection, will rise by 29.4% for each unit increase in the attitude of tax evasion in income tax collection, assuming that all other predictor variables remain at zero.

Effective income tax collection will increase by 16.5% for each unit increase in the value of the peer influence group in income tax collection, assuming that all other predictor variables remain at zero.

Effective income tax collection will see a 19.3% gain in value for each unit increase in the value of tax knowledge and education when all other predictor variables are set to zero.

## **4.6. Discussion**

The descriptive statistical results demonstrate that the range of 3.71 to 4.00 is occupied by the mean scores of the statements pertaining to the dependent variable of effective income tax collection, as well as multiple independent variables that influence it. These variables include tax system complexity, probability of detection, tax rate, penalty, perception of the government's role, attitude towards tax evasion, peer influence group, and tax knowledge and education.

The average value for the following metrics is 4.00 for tax system complexity, 3.96 for probability of detection, 3.61 for tax rate, 3.76 for penalty, 3.80 for perceived government role,

3.73 for attitude towards tax evasion, 3.79 for peer influence group, and 3.90 for tax knowledge and education.

A Pearson correlation test was used to determine the degree of correlation between the dependent variable—effective income tax collection—and the independent variables—complexity of the tax system, likelihood of detection, tax rate, penalty, perceived role of government, attitude towards tax evasion, peer influence group, and tax knowledge and education.

Effective income tax collection, the dependent variable, and the complexity of the tax system, the independent variable, were tested for correlation using Pearson, and the results indicated a positive link between the two variables at the significance level of ( $R = .616^{**}$ ) ( $P < 0.01$ ). The degree of correlation between the two variables is substantial, and in comparison to other relationship factors taken into account in this research, tax system complexity ranks as the eighth highly associated variable with efficient income tax collection. The dependent variable, effective income tax collection, and the independent variable, tax system complexity, have a positive link, according to the results of the Pearson correlation analysis. Therefore, we agree with the first hypothesis.

The study's findings indicated that there is a substantial positive correlation ( $R = 0.749^{**}$ ) ( $P < 0.01$ ) between the dependent variable of effective income tax collection and the independent variable of probability of detection. Probability of detection is the second highly correlated variable with effective income tax collection, according to the magnitudes of the two variables' strong association, as well as comparison to other relationship factors taken into consideration in this study. We support the second hypothesis because the study's findings clearly demonstrated a positive relationship between the independent variable chance of detection and income tax collection.

The tax rate and effective income tax collection have a statistically significant positive relationship at the level of ( $R = 0.649^{**}$ ) and ( $P < 0.01$ ), according to the results of the Pearson correlation test. The tax rate is the sixth strongly associated variable with effective income tax collection, with a magnitude of association that is deemed to be quite strong when compared to other relationship factors taken into consideration in this study. The researcher's first hypothesis

was that the predictor tax rate and the predicted variable effective income tax collection would have a substantial positive connection. Thus, we adopt the third hypothesis as the study's results supported it.

The study's Pearson correlation result between the predictor variable, penalty, and the predicted variable, effective income tax collection, revealed a statistically significant positive relationship between the two variables at a level of ( $r = 0.650^{**}$ ) ( $p < 0.01$ ) from the independent constructs observed thus far. This magnitude of relationship was classified as strong, and, in comparison to the other relationship variables taken into consideration in this study, penalty is the fifth highly correlated variable with effective income tax collection. Penalty and effective income tax collection have a considerable degree of correlation with one another. In light of the so far positive correlation finding between the two variables (i.e., effective income tax collection and penalties) as revealed by the Pearson correlation test, the fourth hypothesis was deemed legitimate and approved.

According to the study's test results, the two variables have a substantial positive link at a level of ( $R = 0.694^{**}$ ) ( $P < 0.01$ ). The strength of the correlation between the two variables was quite high. Perceived government function is the third highly associated variable in this study, based on the independent constructs that have been observed thus far. Using the correlation result between the predictor variable of perceived government function and the predicted variable of effective income tax collection, we were able to demonstrate a positive relationship between the two and, as a result, we were able to accept the fifth hypothesis.

According to the study's correlation test results, the two variables have a substantial positive link at the level of ( $R = 0.755^{**}$ ) ( $P < 0.01$ ). It is the study's first most highly correlated variable due to the strength of the association between the two variables, which was also quite strong when compared to independent constructs. We were able to demonstrate a positive association between the predictor variable of effective income tax collection and the predicted variable of attitude towards tax evasion by the correlation result obtained, which led us to accept the sixth hypothesis.

The study's Pearson correlation test result indicated that the two variables had a substantial positive link at a level of ( $R = 0.652^{**}$ ) ( $P < 0.01$ ). We found that there is a positive relationship between the predictor variable of effective income tax collection and the predicted variable of peer influence group, supporting the seventh hypothesis. The magnitude of the relationship

between the two variables was strong when compared to independent constructs, making it the fourth highly correlated variable in this study.

A substantial positive link between the two variables was found at a level of ( $R = 0.626^{**}$ ) ( $P < 0.01$ ), according to the study's Pearson correlation test results. The data between the predictor variable of effective income tax collection and the predicted variable of tax knowledge and education demonstrated a positive relationship, leading us to accept the eighth hypothesis. The magnitude of the relationship between the two variables was strong when compared to independent constructs, making it the seventh highly correlated variable in this study.

In light of the correlation and hypothesis testing, the researcher concluded by examining the degree of correlation between eight constructs and the dependent variable of effective income tax collection. Accordingly, the Pearson correlation test shows a positive relationship between all the independent variable's components and effective income tax collection; hence, all of the hypotheses were also approved..

The researcher tested several basic assumptions, including residual independence, multicollinearity, linearity, test of normality, and homoscedasticity (equal variance), before performing a multiple linear regression on SPSS. If all of these tests yielded positive results, the regression analysis was carried out. The results of the regression analysis show that the eight variables that determine effective income tax collection—the tax system's complexity, probability of detection, tax rate, penalty, perception of the government's role, attitude towards tax evasion, peer influence group, and tax knowledge and education—when combined linearly, significantly predict effective income tax collection ( $R^2 = 0.720$  and  $P < 0.001$ ). The aforementioned indicates that the eight determinants of effective income tax collection (i.e., tax system complexity, probability of detection, tax rate, penalty, perceived government role, tax evasion attitude, peer influence group, and tax knowledge and education) can account for 72% of the positive variance of effective income tax collection in the sample. The analysis of variance, or ANOVA, is used to determine whether there is a significant difference in the mean of one dependent variable between the categories of another independent variable. The study's findings show that both the dependent and independent variable constructions have P-values that are significantly below 0.05 ( $P < 0.05$ ). Based on the opinions gathered from income tax collection employees, it can be concluded that the R and  $R^2$  between the dependent variable effective income tax collection and the independent variables of determinants of effective income tax collection variables are statistically significant (different from zero).

Another name for the standardised beta coefficient is the relative importance weight. To be more precise, RIWs are the proportionate contributions made by each predictor to  $R^2$  (i.e.,  $R^2 = 0.720$  in our case) after inter-correlation effects have been taken into account. The study's conclusions, which accounted for 36.4% of the beta coefficient, suggested that attitudes towards tax evasion are the most significant factors influencing effective income tax collection. Tax knowledge and education, with 33.4% of the beta coefficient, is the second most significant independent variable that most positively influenced the dependent variable effective income tax collection. It was followed by the complexity of the tax system, opinions on the tax rate, opinions on the penalty, perceptions of government spending, peer influence groups, and tax knowledge and education, with beta coefficient shares of 18.4%, 10.7%, 11.9%, 10.6%, 18.2%, and 19.3%, respectively.

By examining the unstandardised beta value and utilising the regression equation, it is possible to deduce that: when all other predictor variables are set to zero, the value of the response variable, effective income tax collection, will rise by 22.1% for each unit increase in the complexity of the tax system.; The response variable's effective income tax collection will increase by 41.2% for every unit increase in the value of the product probability of detection in income tax collection, 9.3% for every unit increase in the value of the tax rate in income tax collection, and 11.5% for every unit increase in the value of the penalty in income tax collection, all other predictor variables being set to zero. Response variable effective income tax collection will increase by 10.3% for every unit increase in the value of perceived government role in income tax collection, setting all other predictor variables to zero; 29.4% for every unit increase in the value of attitude towards tax evasion in income tax collection, setting all other predictor variables to zero; 16.5% for every unit increase in the value of peer influence group in income tax collection, setting all other predictor variables to zero. Effective income tax collection will see a 19.3% gain in value for each unit increase in the value of tax knowledge and education when all other predictor variables are set to zero.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1. Conclusion**

Effective income tax collection is crucial for the financial stability and development of a country. Understanding the determinants that influence this practice is essential for policymakers and tax authorities to design efficient tax systems. In this thesis, the focus is on examining the determinants of effective income tax collection practice, with a case study conducted in the Nifas Silk Lafto Sub City Small Taxpayer Branch Office of Addis Ababa.

Pearson correlation test was conducted to check the magnitude of the correlation between the independent variable of determinants of effective income tax collection variables such as complexity of tax system, probability of detection, tax rate, penalty, perceived role of the government's attitude towards tax evasion, peer influence group, and tax knowledge and education and dependent variable effective income tax collection. It can be concluded from the correlation result all the components of the independent variable are positively associated with effective income tax collection using the Pearson correlation test, and as a result of this, all hypotheses were also accepted. In addition the result of the Pearson correlation test between the dependent variable effective income tax collection and the independent variable Complexity of tax system is the eighth, probability of detection is the second highly, tax rate is the sixth, penalty is the fifth highly, perceived on the role of government is the third, attitude of tax evasion first, peer influence group fourth, tax knowledge and education is the seventh highly correlated variables with the dependent variable of effective income tax collection.

The regression analysis results, the linear combination of the eight determinants of effective income tax collection variables (complexity of tax system, probability of detection, tax rate, penalty, perceived on the role of government, attitude of tax evasion, peer influence group, and tax knowledge and education) is significantly related to effective income tax collection. From the result it can be concluded that the R and R<sup>2</sup> between the dependent variable effective income tax collection and the independent variables of determinants of effective income tax collection variables are statistically significant (different from zero), based on the opinions collected from employees of income tax collection.

The complexity of a tax system can significantly impact effective income tax collection. A complex tax system may lead to confusion among taxpayers, making compliance more challenging. Simplifying the tax system and providing clear guidelines can enhance compliance rates. Probability of detection is the likelihood of being caught for tax evasion plays a crucial role in influencing taxpayers' behavior. Higher probability of detection acts as a deterrent, encouraging compliance with tax regulations. The tax rate directly affects the amount of revenue collected by the government. Higher tax rates may lead to increased tax evasion, while lower rates could incentivize voluntary compliance. Penalties for non-compliance serve as a deterrent for taxpayers to evade taxes. The severity and certainty of penalties can influence taxpayers' decisions regarding compliance. Regarding the perception of government's role: Taxpayers' perception of the government's role in utilizing tax revenues can impact their willingness to pay taxes. Trust in the government's ability to use taxes effectively can foster compliance. Individual attitudes towards tax evasion can influence compliance behavior. Positive attitudes towards evading taxes may lead to lower compliance rates. Social norms and peer influence within a community can affect taxpayers' compliance behavior. Peer pressure to comply with tax regulations can positively impact effective income tax collection. Tax knowledge and education: Understanding tax laws and regulations is essential for compliance. Educating taxpayers about their obligations and rights can improve voluntary compliance rates. In conclusion, effective income tax collection is influenced by various determinants ranging from the complexity of the tax system to taxpayers' attitudes towards compliance and evasion. By addressing these factors, tax authorities can enhance revenue collection and promote a culture of voluntary compliance among taxpayers.

## **5.2. Recommendation**

In this study, the focus is on examining the determinants of effective income tax collection practice, with a case study conducted in the Nifas Silk Lafto Sub City Small Taxpayer Branch Office of Addis Ababa the following recommendations forwarded to the management of the Taxpayer Branch Office based on the findings of the study:

The taxpayer branch office tax system needs to be made simpler since complicated tax systems lead to lower levels of compliance. For better tax compliance and more effective and efficient tax administration, any changes to the tax code should be informed to the public in their own tongues. In order to improve compliance and reduce the deadweight loss to the economy, audit standards and procedures should be ongoing and regular, as the lack of audits lowers the degree of compliance. Given that the penalty is a negligible component, it makes sense to provide an incentive system for taxpayers with high compliance rates.

The tax authority should endeavor to lower the levels of tax burden by broadening the tax base in order to boost both voluntary compliance and general tax revenues, even if the study concluded that the tax rate is not a significant component in this study.

Auditors should visit taxpayers' business locations in addition to reviewing books of account to lower the amount of non-compliance. This helps identify instances when tax evasion or avoidance is taking place teaching and providing training to taxpayers

By implementing a new likelihood of detection technique, the tax authorities should automate the tax system and integrate and unify it with other macroeconomic reforms.

Taxpayers are cautious about government expenditure, particularly those in higher tax bands. Therefore, in order to promote the advantages of paying taxes, the government should communicate with people about tax programs and spend public funds responsibly and transparently.

The results imply that voluntary compliance behavior can be formed if the tax systems guarantee tax fairness and justice and treat equal people in equal circumstances in an equal manner.

Ultimately, the voluntary collaboration of the tax authorities and society will foster the development of tax compliance. In order to enhance overall tax compliance and income, the government ought to make every effort to raise public awareness of tax issues, and tax education ought to be incorporated into the national education system at various levels. To foster a beneficial synergy for compliance, the government should foster a pleasant relationship between tax collectors and spenders.

### **5.3. Recommendations for Future Studies**

The results of this study are limited to small taxpayers in the Addis Ababa City Administration's Nifas Silk Lafto sub-city small taxpayer branch office. Therefore, given the theoretical and empirical ambiguity surrounding the factors affecting compliance, the study can be further improved by conducting additional research at the regional and national levels by adding more variables to the model that are anticipated to have an impact on taxpayers' voluntary compliance behavior. Finally, further, as-yet-unobserved elements that influence compliance levels may be found by empirical analysis of time series data on corporate tax payers' levels of compliance.

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**APPENDIX I**  
**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**COLLEGE OF BUSINESS AND ECONOMICS**

**Questionnaire to be filled by Tax Payers of Nifas Silk Sub City revenue administration office**

Dear Respondents.

The Addis Ababa University final-year postgraduate students created this questionnaire with the intention of partially fulfilling her MSC thesis, which is titled "Determinants of Effective Income Tax Collection Practice: A Case Study in Nifas Silk Sub City Revenue Administration Office." The provided information will be treated with the utmost confidentiality and used only for educational reasons. You won't be held accountable for anything that results from it. I respectfully ask that you properly complete and promptly return the questionnaire. I sincerely appreciate your cooperation in advance. You can contact me at the following address if you have any additional questions:

Email: **azmerag45@gmail.com**;

Mobile: **+2519126899990**

**NB:**

- Writing your name down is not required.
- Make an effort to respond to every query listed below.
- Choose your answer using the (✓) symbol for the closed-ended questions.

**PART 1: BACKGROUND OF RESPONDENTS**

1. Gender

Male

Female

2. Educational Background:

Grade 10 completed

Grade 12 completed

Certificate

College diploma  First Degree  Second Degree and above

**PART 2: QUESTIONS DIRECTLY RELATED TO THE STUDY**

Here under are the statements that portray the *determinants of effectively income tax collection*. Use the five-point Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. Put a “√” or “X” mark on the space provided.

<b>Opinion of respondents on complexity of tax system</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
Tax system is very complicated and affects the tax compliance level of taxpayers					
Due to the complexity of the tax system and rules, support of tax consultant is necessary					
If tax rules and regulations are easy to understand and apply tax compliance will be improve					
<b>Opinion of respondents on probability of detection</b>					
Taxpayer might not to be evaded tax if the probability of detection tax high					
Taxpayers who have never been audited or investigated before are more risk taker					
The tax office has no sufficient resources and capacity to audit or surveillance every taxpayers					
<b>Opinion of respondents on tax rate</b>					
The current profit tax rate is very high and it should nee to reduced					
The tax rate for higher company larger than individual trader					
The tax rate should be the same for every business regardless of their legal formation					
The tax rate should decrease as annual income increases so that large taxpayers will pay at lower rate as their income increases					
<b>Opinion of respondents on penalty</b>					
High penalty on noncompliance increase tax compliance					
I comply with tax requirements because of fear of penalty					
Taxpayer penalized in previous periods will comply in future					
<b>Opinion of respondents on perceived on the role of government</b>					
If the government spends too much tax revenue on unnecessary welfare it encourages tax noncompliance					
If people are getting comparable public services from the government it enhance taxpayers compliance					
If taxpayers perceptions of tax fairness increases, the level of tax noncompliance will be also decrease.					
<b>Opinion of respondents on attitude of tax evasion</b>					
A good political system has positive impact on tax payer’s attitude towards to avoid tax evasion					
Tax behavior towards the general level of tax evasion is dependent on the desirability of the government program					
Paying tax is my own responsibility					
Taxpayers is paying tax fearing the tax penalty					

If tax law should be respected it discourages the attitude of tax evasion.					
<b>Opinion of respondents on peer influence group</b>					
The noncompliance of other tax payers has a negative impact on compliant of taxpayers behavior My relatives and friends action that affect my decision to reduce tax liability					
If one taxpayer is penalized due to tax evasions that may affect other not evade tax.					
<b>Opinion of respondents on tax knowledge and education</b>					
Sufficient tax education and trainings are given on the purposes of tax its regulations					
Taxpayers with little tax knowledge don't comply tax requirements					
I have sufficient tax knowledge that helps to fulfill my tax obligations.					
<b>Opinion of respondents on tax compliance</b>					
Tax noncompliance has negative impact on a country's growth and development					
Government service to the public may reduce due to low tax compliance					
Tax noncompliance distorts resources allocation to the society.					