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THE DETERMINANTS OF TAX COMPLIANCE THE CASE OF EAST BELESSA WEREDA OF AMHARA REGION, ETHIOPIA

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"The Determinants of Tax Compliance the Case of East Belessa Wereda of Amhara Region, Ethiopia"

By: Michu Woreket Atnafu

Approved By the Board of Examiners:

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External examine

DECLARATION

I hereby declare that this thesis under the title of’’ the determinants of tax compliance in case of East Belessa Wereda” is my original work .it has not been present any other university or institution and that all resources of materials used for the study has been duly acknowledged.

Declared by:

Michu Woreket Atnafu signature -------- date-----------

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TABLE OF CONTENTS

List of tables

LIST OF FIGURES

LIST OF ANNEXES

ACRONYMS

Br - Birr

CRRA- Constant relative risk aversion

DGT - Directorate general of taxation

E.C - Ethiopian colander

FDG -Focal discussion group

GDP - Gross domestic product

GTP - Growth and transformation plan

HMRC - Her majesty's revenue and customs

IJRRCEM -International journal of recent research in economic and management

IJST - International journal of science and research

IRB - internal revenue board

IRS - internal revenue service

JEIBR - Journal of economic and international business research

N.d- No date

SME - Small and medium enterprises

TC - Tax compliance

UNU - united Nation University

US - United state

USD -United state dollar

VAT -Value add tax

Vif - variance inflation factor

ABSTRACT

*Aiming at identifying the determinants of tax compliance, this study was conducted in East Belessa Woreda. The target population of the study was category **C** tax payers of East Belessa Woreda which were 874 in number. Quantitative research approach through cross-sectional data was conducted. A sample of 267 category **C** tax payer was taken using stratified sampling followed by random sampling from each stratum. The study used both descriptive analysis and econometric model. The descriptive statistics results indicated that the majority of both the compliant and non complaint respondents responded that the main reason why tax payers did not pay their tax on time and the actual amount was problem of fairness of tax system, lack of awareness and no trust in government spending. Binary Logistic regression model identified the factors that affect tax compliance were sex of tax payers; first degree and above tax payers, level of income, trust in government spending, tax knowledge and fairness of tax system have significant effect on tax compliance. Whereas age, religious, tax rate, penalty, complexity of tax system and trust in the public official were not significant effect on tax compliance. The finding of the results revealed that being male was negatively associated with tax compliance. Similarly, high level of education was negatively related with tax compliance. Moreover, the negative perception of fairness was negatively associated with tax compliance. On the other hand, the level of income was positively associated with tax compliance. Similarly, the tax knowledge was positively associated with tax compliance and the Perception on government spending of tax payers was positively related with tax compliance.*

Key words: *tax compliance, tax evasion, tax avoidance, and attitude and perceptions.*

CHAPTER ONE: INTRODUCTION

1.1 Background

Tax is a compulsory payment and those who are taxed have to pay the sums irrespective of any direct return of services or goods by the government (Bhatia, 1976; James, 2000, as cited in Tilahun and yidersal, 2014). The payment of tax is a civic duty and an imposed obligation by government to achieve its financial resource or run utilities and perform other social responsibilities (Eiya, et al., 2016). Though death and tax are certain to exist in life,_most individuals do not like paying taxes in the right amount and on time, and they take different actions to reduce their tax liability (Anima and Saniya, 2015).

Taxation is an important source of revenue to government in both developing and developed countries to provide the basic goods and services. This can only be realized if all taxpayers willingly comply with the tax laws and the desire to encourage one's society is the highest desire of every patriotic citizen. But the amount of revenue generated by government from such taxes for its expenditures depends among other factors, on the willingness of the taxpayers to voluntarily comply with tax laws. The failure to follow the provisions of the tax implies that the taxpayer may be committing an act of noncompliance (Eiya et al., 2016).

Towards the end of the 20th century, governments have realized that a change is needed in order to increase the amount of taxes collected. Thus, using adequate strategies based on understanding the reasons which drive compliance decisions is greater than strictly applying laws and regulations (Larisaa et al., 2012). Even if the role of government has increased and government has to collect more tax than ever to finance its operation, governments are facing difficulties in collecting the tax they need for many reason. One of the main reasons is tax non compliance (Anima and Saniya, 2015).

Today, the incidence of tax noncompliance remains the serious concern to the majority of tax administrators around the world. Especially, in developing countries, tax noncompliance is a serious challenge facing income tax administration and hindering tax revenue performance. Tax noncompliance not only poses a serious threat to effective tax and voluntary compliance; it also has a negative impact on the economy (Chepfurui et al., 2014). For instance, In 2008/2009, Her Majesty's Revenue and Customs (HMRC) or the department estimated that the United Kingdom tax gap which is difference between the tax payable if all obligations are met and tax actually collected was around £42 billion, and of this, £15 billion was due to tax fraud, evasion and some criminal activities with the remainder due to error, non-payment and avoidance (HMRC, 2010).

In 2011, the US amount of unpaid income taxes for individuals and corporations was USD 373 Billion (Government Accountability Office, 2012) and in developing countries, statistics estimated the average tax evasion in 2002 was between 35 and 55% of the Gross Domestic Product (GDP), which is worse than that of developed nations (Terkper, 2003, as cited in Abdulsalam,2015).

Tax noncompliance is also socially destructive because it can reduce revenue, distort labor market and weaken state stability by feeding perception of cheating and fraud. Reducing noncompliance can be effective if the reason for noncompliance by tax payers is known. Understanding the motivations underlying taxpayers' attitudes and behaviors toward voluntary compliance is constructive to tax authority by providing them information that can help them which strategy is appropriate and effective to increase compliance (Larisaa et al., 2012).

Tax compliance is currently a topical policy issue, especially in developing countries, as governments are seeking ways to improve efficiency in tax revenue collection to finance their budgets (Nelson, 2014).Tax compliance plays an important role to determine the amount of levied tax that managed by the Directorate General of Taxation (DGT); the higher the tax compliance, the higher of impact on tax increases. Tax revenue target achievement can be used as a source of funds for the government to finance state expenditures (Ayu et al., 2016).

The sustainable strategies for tax compliance should be oriented toward the use of advice rather than force. A heavy trust on use of semi-military operations to prevent tax evasion may result in short term revenue increases, but may prove to be difficult to sustain in the longer run and have considerable implications for politics in a democracy (Beesoon et al., 2016).

The present study tries to reveal the different reasons, factors, or determinants which shape taxpayers' behavior and to underline the idea that tax authorities have to be aware of and understand these determinants if their aim is increasing the level of tax compliance (Larisaa et al., 2012).

When the researcher referred to the research done in this area, the majority of them focused on category A and B tax payers and some specific determinants of tax compliance. In addition, as far as the researcher's knowledge is concerned, there is no research done in similar or related topic in East Belessa Woreda. Hence, this research investigated the determinants of tax compliance in East Belessa Woreda by taking category C tax payers. The reason for taking category C tax payers is that those tax payers are large in number and the tax system faced so many problems in this category as compare to other categories. Even if other categories are small in number, it is difficult to include them as they have different responsibilities; and there is no available data with regard to their category. Thus, this study is significant to the area. It is important for different organizations and will also add value to this study area to fill the research gap and evidence for further research as the country case.

1.2 Statement of the Problem

The Problem of tax compliance is as old as taxes themselves. Charactering and explaining the observed patterns of tax noncompliance, and ultimately finding ways to reduce it are obviously important to nations around the world (Andreoni et al., 1998).

Most developing countries are currently dependent more on external financial resources to fund their development activities. Ethiopia, like any other developing countries, faces difficulty in raising revenue to the level required for the promotion of economic growth. Hence, the country experienced a consistent surplus of expenditure over revenue for sufficiently long period of time (Shina, 2014).

Because of this in the last decade alone, the Ethiopian Government introduced major tax administration reforms to improve the performance of Ethiopian tax administration in generating revenues for the Government. In addition, the Ethiopian government paid emphasis to the tax issue in the five year Growth and Transformation Plan 1 and 2 on which the government has been working hard to achieve the planned economic growth of the country. In the GTP, the government clearly stated that efforts will be geared towards promoting compliance and equipping tax collection institutions with adequate enforcement power which will further boost revenue mobilization at federal and regional levels **(**Tilahun and yidersal, 2014).

Despite all the tax reform measures are taken, the behavioral aspects of tax compliance decision making issues of income tax payers of tax system has not improved quite considerably over the last decade. For instance, Ethiopian current tax-to-GDP ratio is 11% which is lower than the average for developed countries tax systems (25-35%), developing countries (18-25%) and even if the Sub-Saharan average (16% (Samuel and p.viswanadham, 2016**).**

There are many factors that contribute for the low level of tax income in developing countries, but tax noncompliance is one of the main factors in this respect. Ethiopia, like many developing countries, suffers from tax revenue loss due to tax noncompliance (Anima and Saniya, 2015). In Ethiopia, 36% of the economy is not reported and captured by the official statistics. At the same time, the amount of tax evasion reached 10% of the economy (Workineh, 2016).

Particularly, in East Belessa Woreda, the problem of non tax compliance is very challenging with respect to tax evasion, unpaid on time and the actual amount. For example, in 2015/2016, East Belessa Revenue Office estimated, through audit and different investigation, about 4.2 million birr which was uncollected due to tax fraud, evasion, non-payment. Specifically, category c tax payers are not voluntary to upgrade their category level. In order to escape from this, they report under income and separate their tax liabilities in different ways of illegal activities. In addition, in order to evade the tax, they notify to the revenue office that stops the business activity, but they do and some tax payers are also hidden during the tax payment period. In general, about 70% of the tax payers are subjected to pay their tax obligation without the existing power full tax law or voluntary tax payers.

There are many studies that have been done in this area. However, the larger contribution of the researches is significant in developed country like, US (James, Brian and Jonathan, 1998), Australia (Erich, Apolonia ,and Alexander, 2006),Switzerland (Werner & Hannelore, 1996), Europe (Torgler, 2011), Malaysia (Mohd, 2010 and Jeff, 2008), Korea (Chang and Jin, 2003), India (Gupta, Ghosh AndMookherjee, 2004), Bulgaria (Georgi, 2008), Iran (Reza, Hadi and Hamid, 2011) and Switzerland (Werner and Hannelore, 1996). There are a little works done in Africa like Kenya (Lumumba, Migwi, and Peterson, 2010), Nigeria (James, Zaimah, and Kamil, 2011: M. N. Ogbonna, 1975), Egypt (Richard, 1976) and Ghana (Stephen, 2011).In Ethiopia, few researches have done by Wubshet (2011), Lemessa (2007), Bisrat (2010), Wollela (2009).

In addition, almost all researches that had been done on this area focused on category **A** and **B** tax payers. Particularly, in East Belessa Woreda as well as in North Gondar Zone, there is no, as far as the researcher's knowledge is concerned, research done in this area. Therefore, this research was conducted to identify the major determinants of tax compliance among category C tax payers in East Belessa Woreda which helps to increase tax revenue through encouraging tax compliance.

1.3 Research Questions

- What are the major determinants of tax compliance among the category c tax payer in East Belessa Woreda?
- Which tax system or structure factors mediate tax compliance among the category **c** taxpayers in East Belessa Woreda?

1.4 Objective the Study

1.4.1 General Objective of the Study

The general objective of this study is to analyze the major determinants of tax compliance among category **c** taxpayers in East Belessa Wereda.

1.4.2 Specific Objective of the Study

- To examine tax system or structural factors mediate tax compliance among the category **c** taxpayers in the study area
- To examine the effect of tax payers' attitude about fairness, trust in government spending and public official effect on the tax compliance among category **c** taxpayers in the study area.

1.5 Significant of the Study

The government will be expected to fulfill the need of citizens through different financial sources .Among these, tax is the main source of finance for government expenditure. So, improving tax compliance will increase the revenue available leads to fulfill the need of citizens.

Hence, this study will be important to revenue authority or policy makers to design an efficient and effective tax system or it may help to minimize the existing problems. It will help to increase the tax revenue by encouraging the tax payers' compliance with taxation and it also will give some highlights for researchers who need to conduct further research on the topic and policy makers to address the issues.

In general, in East Belessa Wereda as well as North Gondar zone, there was no research conducted on the determinants of tax compliance. So, the study of this area has multi-dimensional importance.

1.6 Scope of the Study

The study would focus on only the determinants of tax compliance in category **c** business income tax payers in East Belessa Wereda .These taxpayers were sole proprietor owned business that are not corporation tax payers. However, the study included only three kebeles' category **c** tax payers because other kebeles' tax payers are very small in number. Category A, category B and other tax payers are different from category C in some conditions so that it is difficult to examine together in this study. Due to this difficulty, time and other constraints, they were excluded from this study. In addition, this study focused only on the selected factors of tax compliance; such as, age, gender, religious, education, tax knowledge, level of income, fairness of tax system, penalty, tax rate, complexity of tax system, trust in the government spending and the public official authority office

1.7 Origination of the Research

The rest of this thesis is organized in four chapters. Chapter two covers review of related literature which incorporated different theoretical and empirical studies on the research topic. The conceptual frame work has been included in this chapter. Chapter three-methodology of the study- included the study design, data types and sources, the study area and period, the sample size and techniques, data collection tools , the study variable and model specification and method of data analysis , test of model and reliability test . Chapter four included results and discussion and chapter five- the summary section- included conclusion and recommendations.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1Introduction

This chapter would include both the theoretical and empirical literature with the respects to the definition and analysis of tax compliance.

2.2 Theoretical literatures

2.2.1 Overview of Taxation

Tax is an obligatory charge, imposed by government on income, expenditure, or capital assets, for which the taxpayer expects no direct return in benefit (Lymer and Oats, 2009).The existence of collective consumption of goods and services necessitates putting some of our income keen on government hands. Public goods are usually supplied by public agencies due to their nature of non-rivalry and non-excludability. Every citizen has the right to use the goods provided and the goods which are used by one citizen cannot prevent another person from using the same good at the same time. For the reason that characteristics of public goods, private investors are not only willing to provide it yet also do not have the ability to benefit it since it needs huge investment. A good tax system should not affect the ability and willingness of the people to work, save and invest otherwise, it will hinder the development of the economy as a whole (Ramaswami, 2005).

Among the main reasons why the government imposes taxes is to generate income to administer the economy and reallocate resources (Mohd, 2010). Government levy tax for different objectives. Some of the objectives of taxation as listed by Ramaswami,(2005) include: to raise revenue, to remove inequalities in income and wealth among citizens, to Insure economic stability, to minimize regional imbalances, to accumulate capital, to create employment opportunities, to prevent harmful consumption and to enhance the living standard of citizens. Currently when compared to previous periods, the burden of the government has increased which results in more resources to finance its activities.

Among the sources of finance for government tax revenue constitutes the lion's share (Ahangar, et.al. 2011). Whatever its function and essence, tax is fundamentally important for the existence of a government and a nation. Though, taxation is an essential instrument for the development of an economy, while framing the tax policy, the government should consider not only its financial needs but also taxable capacity of the community. Besides this the government has to consider some other principles which are cited in different literatures as canons of taxation which includes the following Principles (Ramaswami, 2005).

1. Canon of Equality: taxpayers should contribute to support their government in proportion to their ability. Tax burden should be more on the rich than on the poor. Which can be determined based on income, wealth or consumption
2. Canon of Certainty: the time, amount and method of payment have to be clear and certain so that the taxpayer can adjust his income and expenditures accordingly. This results in removing uncertainties and help to ensure smooth functioning of the tax system.
3. Canon of Convenience: when taxes are levied and collected they should be in such a way suitable to the taxpayer. So that taxpayers will be comfortable with the tax system.
4. Canon of Economy: this canon reveals that out of the taxes collected the minimum possible amount should be spent on tax collection and the possible maximum amount collected should enter to the government treasury. This canon comprises that taxation should be inexpensive in collection, and hinder as little as possible the growth of wealth.
5. Canon of Productivity: the canons of taxation the concept of productivity as, taxation should ensure adequate revenue to the Government and it should encourage productive activity by encouraging the people to work, save and invest.
6. Canon of Simplicity: the tax system should be easily understandable for ordinary lay man; how to calculate their tax liability and other necessary information should be put in a clear manner which does not need an expert's help.

2.2.2 Concept of Tax compliance

As Brian, et al. (1998) tax compliance can be defined as the taxpayers' willingness to obey tax laws in order to obtain the economy equilibrium of a country .According to Mohd and Ahmad (2011) tax compliance should be defined as Taxpayers' ability and willingness to comply with tax laws which are determined by ethics, legal environment and other situational factors at a particular time and place. Similarly, tax compliance is also defined by several tax authorities as the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pays the right amount of taxes on time (IRS, 2009; ATO, 2009; IRB, 2009) as cited in (Mohd and Ahmad, 2011**).**Tax compliance has been an important subject of research in a large number of developed and a number of developing countries. Since each country has its own approach to managing tax compliance levels and each has different tax laws and regulations, the factors impacting tax compliance behavior appear to vary among Countries (Tilahun and yidersal 2014**).**

One measure used to determine a country's tax mobilization (tax compliance) is tax as a percentage of GDP. The issue of tax compliance is extremely important both to those concerned with the key role the increased tax yields can play in restoring macroeconomic balance and those concerned with tax policy and its effects on the economy in general **(**Chepfurui, et al 2014**).**

The branches of tax compliance is an extension from McBarnett's model(N.d) (as cited in Alabede et al.2011) **figure 1** which had identified Capitulate compliance, committed compliance and creative compliance. Capitulate compliance occurs when taxpayers unwillingly fulfill their obligation, but they still fulfill; inversely, committed compliance refers to a situation where taxpayers voluntarily pay taxes without complains or public coercion; creative compliance, on the other hand, describes a situation when taxpayers take an action to reduce tax liability by re-examining income and expenses within legal context. This is also known as tax avoidance. The definition of tax avoidance and tax evasion are usually confused by taxpayers. Kay (N.d) (as cited in Slemrod & Yitzhaki, 2002) differentiated tax avoidance and tax evasion by legality of their action in tax reporting, which also means that, taxpayers who involve in tax avoidance are actually understand the tax laws and strategize tax treatment wisely, so that they are not liable to tax. It is also known as tax planning. However, tax evasion is an action taken by taxpayers that they underpay or escape from tax by either misinterpreting the laws, underreporting income or overstated expenses illegally and intentionally. For example, produce a false invoices or expenses bills to reduce the chargeable income. Whether taxpayer is intentionally or unintentionally does not comply with tax laws is considered as tax non-compliance (James & Alley, 2004). Alabede et al. (2011) described that ignorance, omission or misinterpretation while employing tax rules & regulations are those circumstances where taxpayer normally unintentionally not complying with tax laws. Whilst, purposely understating income and overstating expenses, failing to submit tax return and make tax liability payment before due date, are defined as intentionally tax non-compliance. Tax evasion is categorized as tax noncompliance.

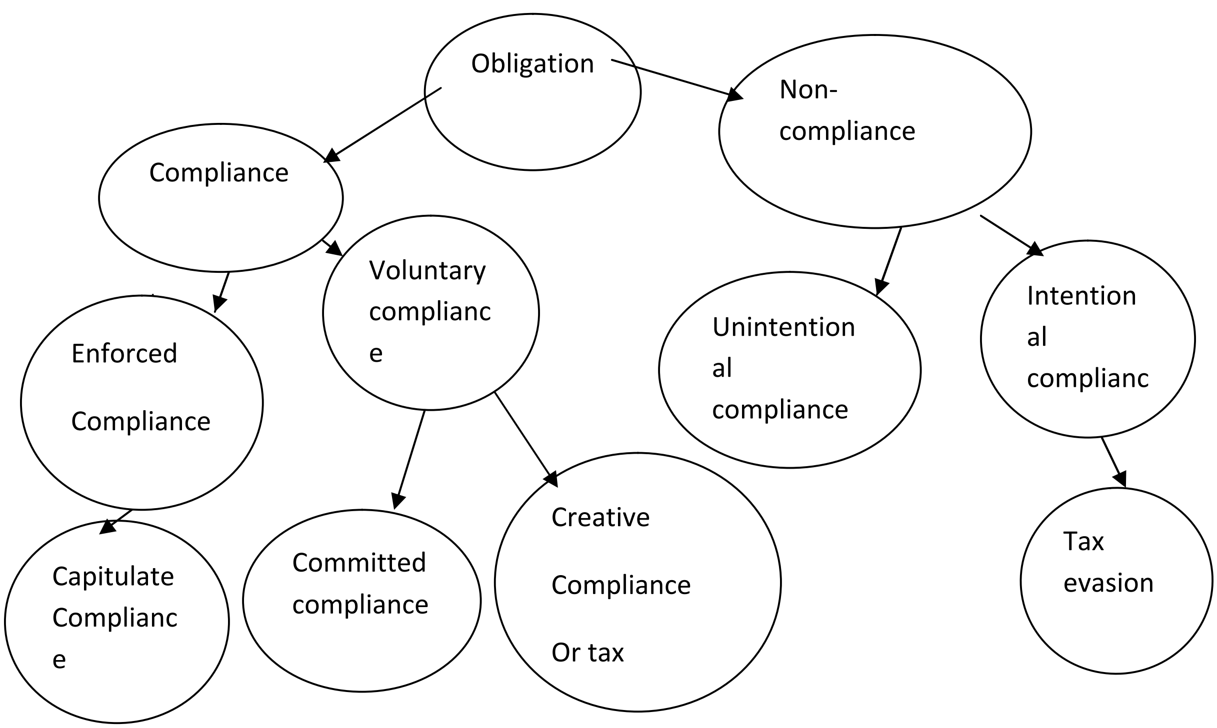
The economic theory of tax compliance by Allingham and Sandmo (1972) was originally declared as a person who has a declared income tax obligations. This model goes by the name economics-of-crime. Here is that tax payers as rational individuals always want to maximize their individual utility. When they decide to comply or not to comply, they use cost-benefit analysis of committing the crime. For this reason, this basic model suggests that increasing enforcement by the tax authorities would help reduce the problem of tax non-compliance (ibid.) as cited in Zemenu and Abdu (2015).

In the model, the taxpayer is assumed to have an income I and must choose the amount to declare to the tax agency (Alm, Jackson and McKee, 1992).Declared income D is taxed at the rate t; undeclared income is not taxed, but the taxpayer will face a probability of detection p at which point a fine f will be imposed for cheating. The taxpayer has the choice between two strategies: (1) He can declare his true income or (2) he can declare less than his true income. If he chooses the latter strategy his payoff will depend on whether or not he is investigated by the tax authorities. If he is not, he is clearly better off than under strategy one. If he is investigated, he is worse off as the audit may lead to penalties. Thus the taxpayer chooses D to maximize the expected utility of the evasion gamble. This framework suggests that declared income depends upon I, p, f and t: $D = f(I, p, f, t)$. This model shows that declared income D varies directly with income, the probability of detection (audit rate) and the penalty (fine rate), but inversely with the tax rate.

There are other factors that affect compliance that is the declared income D may be modified to reflect individual's receipt of Government expenditures G as follows: $D = f(I, p, f, t, G)$. Thus compliance is also directly related to individual's perceived benefits from public good funded by their tax payments although the Allingham and Sandmo Model of 1972 is elegant in its simplicity, many potentially relevant noneconomic factors are necessarily omitted.

According to behavioral model theory which incorporate sociological and psychological, there are some people who never evade paying taxes even when the risk is sufficiently low to encourage cheating behavior (Baldry, 1986) as cited in larissa et al., (2012a) that is taxpayers are seen no longer as selfish utility maximizes but as human beings motivated to pay taxes on the basis of different attitudes, norms, beliefs, perceptions, feelings, social characteristics, cultural background like age, gender, race, religion etc. According to the 'slippery slope' framework, trust in authorities and power of authorities are two main dimensions shaping tax compliance. Trust in authorities is defined as 'the general opinion of individuals and social groups that the tax authorities are benevolent and work beneficially for the common good' and power of authorities is defined as 'taxpayers' perception of the potential of tax officers to detect illegal tax evasion and to punish tax evasion' (Kirchler et al., 2008). Both trust in authorities and power of authorities increase tax compliance, but the quality of compliance differs: voluntary tax compliance is achieved by increasing levels of trust; enforced tax compliance is achieved by increasing levels of power.

Figure 1: Branches of tax compliance



Source: Adapted from Alabede et al. (2011).Determinants of tax compliance behavior

2.3 Empirical literatures

2.3.1 Determinants of tax compliance

The researcher interests to investigate the main determinants that affect the tax compliance. To this end, the researcher refers different journal and researches related to the topic. When the researcher reviews different researches, different scholars tried to list out various factors that affects the tax compliance. As Anima and Saniya (2015) the determinant of tax compliance has been classified differently by different researchers. But most of these classification overlap on one another. However, the researcher took basically Fisher's model that list out and categorized factors of tax compliance which provides a framework for understanding the influence of those socio-economic and psychological, noncompliance opportunity and tax System/structure components on taxpayers' compliance decision and add other scholars' variable.

Jackson and Million (1986) carry out a comprehensive review of the tax compliance literature and identify 14 key factors that have been studied by researcher on tax compliance as cited in Gerald and Patrick (2009). These factors are categorized by Fischer and associates into 4 groups (Fischer Model) that is **(1)** demographic factors which includes age, gender, and education, (**2)** noncompliance opportunity which includes income level, income source and occupation, (**3**) attitudes and perceptions includes fairness of the tax system and peer influence and (**4**) tax system/structure which includes complexity of the tax system, probability of detection, penalties and tax rates. Considering the most relevant for this study, the researcher limited the above determinants to age, gender, , education, , level of income, fairness of tax, penalty, tax rate, complexity tax system and add religious, tax knowledge, trust on the government spending and trust on the public official authority office.

2.3.1.1 Demographic Factors

Age: As can be seen in Anima and Saniya (2015**)** age affects tax compliance positively. This indicates that as the age of the tax payers' increase being compliant will also increase. In contrast , according to Mohd and Ahmad**(**2011), the older people will comply less if there is no equity and fairness in the tax system and any changes in government policy on fuel prices, electricity and water rates are not favorable. But for other tax compliance assessment items, opinion of tax payers was not dependent on age.

Gender: according to Wollela and odd (2016**),** Gender was found to be have a statistically significant relation with compliance attitude which female respondents were more likely to show a compliant attitude. Similarly as Anima and Saniya (2015**)** sex was found to be positive and significant with tax compliance. Women are found to be more compliant than men .In contrast as Michael's and Willy's (2015**)** findings on gender revealed that males are more compliant than females among the respondent indicating in SMEs investors. According to Tilahun and yidersal (2014) the results revealed that gender of the tax payer has no impact on tax compliance behavior.

Education level: the higher the education level ones possesses, the higher the respect ones would pay to the laws and more opposed to tax noncompliance (Ross& McGee, 2011). This is because; people can comprehend tax laws better with certain education level, hence, become more compliant as they realize their obligations and duties towards the government and even towards the country. It is contradicted with the result found by Stulhofer (N.d) (as cited in Gerxhani, 2007) that tax noncompliance increases with education level. With more understanding of tax system, may misuse the knowledge to find ways searching for weaknesses and loopholes in the tax system and try to evade.

Tax knowledge: Education level may not necessarily coincide with tax education and this is the reason that education level of taxpayers and tax education are tested separately as two independent variables. Laws are normally difficult to understand due to some jargons and terminologies, same goes to taxation (McCaffery & Barron, as cited in Barbuta-Misu, 2011), which resulted taxpayers tend to misinterpretation or misunderstanding in tax laws and policies if there is lack of profound tax knowledge. According to Mohd and Ahmad **(**2011) in the self assessment system in Malaysia, tax knowledge has a significant impact on tax compliance. This positive relationship illustrate that taxpayers with higher tax knowledge potentially tend to be more compliant.

In contrast, Tilahun and yidersal (2014) Education and compliance attitude revealed a negative and statistically significant correlation, a higher level of education was associated with a less compliant attitude. In special one, as *Beesoon, et al. (2016)* on gauging the tax knowledge of the Mauritian taxpayer, and several paradoxes were noted. That is the local taxpayers are willing to comply with the laws but their lack of knowledge makes them non-compliant. This study explains the determinants of tax compliance; further studies can build on this one to assess.

Religious: The tax compliance has been an issue in many developing countries. Most of the earlier researches on tax compliance have focused on economic factors such as tax audits and penalties in order to discourage tax evasion. However, this approach has been criticized by researchers who believe in the need of examining the non-economic factors in order to fully understand taxpayers' compliance behavior. One of such non-economic factors which have been neglected by most researches on tax compliance is religiosity (Eiya, et al., 2016**).**

Religiosity has not been widely recognized in tax compliance research as one potential element that might explain the puzzle of tax compliance until several researchers such as (Torgler, 2003; Welch, Xu, Bjarnason, Petee, O'Donnell, & Magro, 2005; Stack & Kposowa, 2006 as cited in Eiya, et al.,2016**)** emphasized the importance of religiosity in tax compliance. Religion has an influence on behavior and tax compliance is a behavioral issue. The religious values held by most individuals are generally expected to effectively prevent negative attitudes and encourage positive attitudes in an individual's daily life and, hence, religiosity is presumed to positively motivate taxpayers to voluntarily comply with tax laws.

2.3.1.2Attitude and Perception Factors

Fairness of tax: according to Anima and Saniya (2015**)** the tax compliance and fairness of the tax system was found to have a positive relationship imply that as a fairness increase tax compliance will increase and vice versa .In addition to this, Tilahun and yidersal (2014) also indicated that perception on equity and fairness of the tax system have positive relationship and significant impact on tax compliance. In contrast, according to Nelson (2014**)** SME operators' perceptions on tax fairness and tax service quality have the power to influence their tax compliance decisions

Trust on government spending: as Anima and Saniya (2015) the way taxpayers perceive the government has its own effect on the tax compliance behavior of taxpayers. The more the government spends the tax money on public goods, the more people will be willing to pay tax voluntarily and regularly. Perception on government spending has positive relationship and significant impact on tax compliance. In contrast as Beesoon, et al., (2016), Government spending does not impact on the compliance behavior of tax payers in Mauritian country.

Trust in public officials: Torgler and schaffner (2007) found that there is a significant positive relation between public official and tax compliance.

2.3.1.3 Tax system or Structure Factors

Simplicity or complexity of tax system: tax system should be as simple as possible for the reason that taxpayers come from various background, with different level of education, income level, different culture and different tax knowledge Larissa et al. (2012b).

Most of the time taxpayers not only find it difficult to file their own tax returns correctly but also perceive tax law complex and ambiguity as a cause of tax non- compliance (Erich, et al. ,2009). According Torgler and schaffner (2007) argues that complexity may result in unintentional noncompliance if tax payers have problems filling the tax form.

Penalty: according to Chepfurui, et al (2014); Michael and Willy (2015**),** there was a positive effect between penalties and tax compliance. This indicated that an increase in penalty the tax compliance improves that is the higher the penalty the greater discouragement for potential tax evasion**.** Similarly as Tilahun and yidersal (2014), Penalties have positive relationship and significant impact on tax compliance. In addition, as Nelson (2014), Tax penalties can positively influence timely filing of tax returns by SME taxpayers. In contrast, as Anima and Saniya (2015) penalty to be penalized by the tax authority will decrease individual compliant to the tax law. However, according to Ay (2015 penalty was generally viewed as being ineffective in influencing compliance behavior.

Tax rate: as Kanybeck (2008), among the more interesting results is the finding that the degree of business tax evasion is not likely to be lessened by lower tax rates. This outcome is similar to the Nelson (2014) higher tax rate would lead to lower tax compliance and Michael and Willy (2015) the tax rates are negatively related to tax compliance that is the higher the tax rates the lower the level of tax compliance

2.3.1.4 Non Compliance Opportunity Factors

Income levels: Nabei, et al (2011) this indicates that on average increase in the taxpayer's income leads to low compliance by the respondents. That means increase in sales volume leads to poor tax. However, as Ross & McGee (2011), the higher the income level, the more ones opposed to tax non-compliance this is because, if one has higher income, ones may have more respect to authority. In other words, if one has lower income, then would have less respect to authority tax compliance. This indicates that one rationalized this action by applying ability to pay principle.

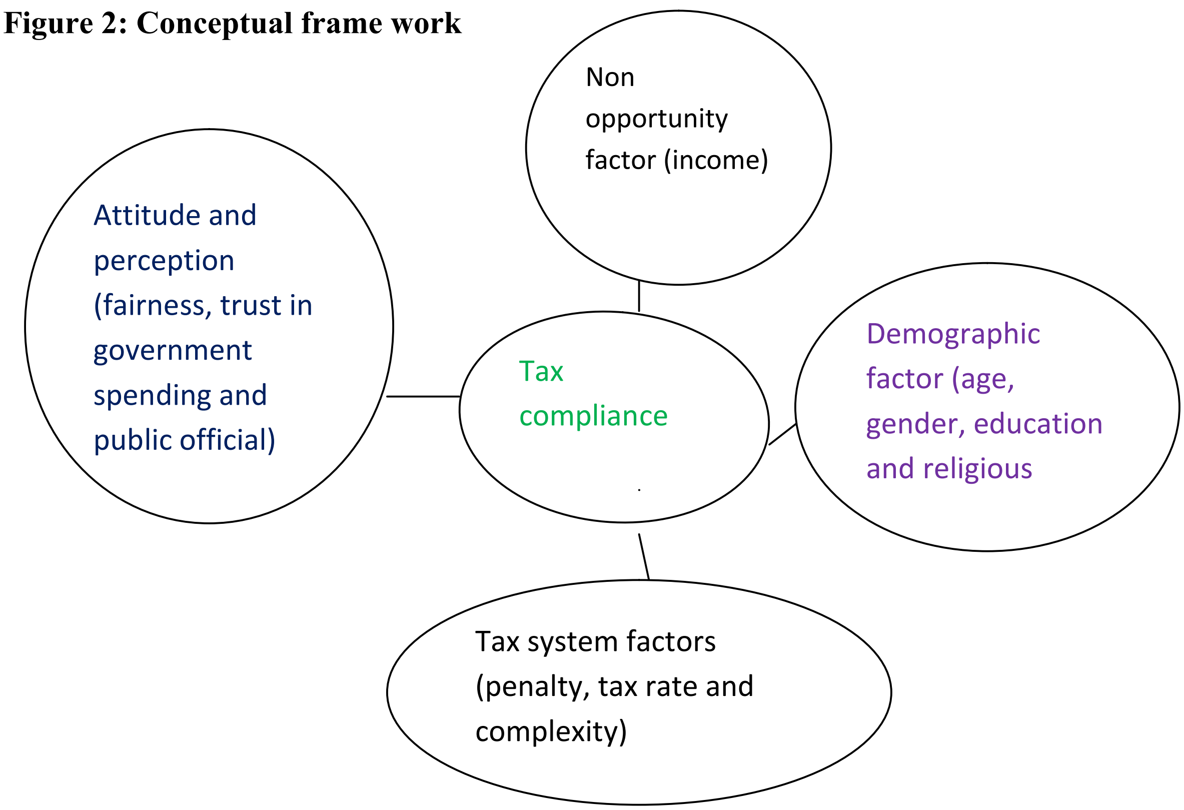
As Chang and Jin (2003**)**, Taxpayers have same degree of compliance regardless of their income levels, which can be interpreted as an evidence of the utility function with CRRA.

In general, there are many studies have been done in this area. However, the larger contribution has in developed country, in Africa a few, especially in Ethiopia has few researches done in this area. While reviewing the related literatures, the findings of different scholars with regard to the effect of a specific determinant on tax compliance is not conclusive. This drew the researcher's attention. Additionally, as to the researcher knowledge, the researches done by different scholars were focused on the determinants of tax compliance on the higher tax payers (category A and B). This also initiates the researcher to investigate the main determinants of tax compliance on category C and how these determinants relate to tax compliance in the study area.. Because knowing what determines taxpayers' compliance, is half part of the solution towards increasing tax revenue and at the same time, fills in our countries case the literature gap and internationally the knowledge gap

2.3 Conceptual framework

A conceptual framework is a graphical or diagrammatic representation of the relationship between variables in a study (Mugenda, 1999). The following Figure 2 shows the conceptualization of the dependent and independent variables of the study represents how they are related and the model also serves as a basis for this research. The independent variables are demographic factors, non opportunity factor, attitude and perception, and tax system factors. The dependent variable is tax compliance. These variables are preferred on the framework of reviewed related literatures.

Figure 2: Conceptual frame work



CHAPTER THREE: METHODOLOGY

3.1The Study Area

This study was conducted in East Belessa Woreda, North Gondar zone; Amhara Region. East Belessa Woreda is 179 km far away from Gondar and 180 km from Bahir Dar. There are 5 kebeles which collect business income and other kebeles collect mainly land use revenues. East Belessa Woreda is administratively structured in to 3 urban kebeles and 19 rural kebeles .The total population is 135,325(male = 6, 9307 and female = 66,018); as projected from central statistical Agency population census in 2016. According to revenue office tax year that is from june1 to July 30, 2008 E.C, there were 967 business income tax payers (category C =874, category B = 23 and category A =70).

3.2The Study Design

Quantitative research approach through cross-sectional study was conducted to identify the main determinants of tax compliance. For attitude and perception questions, the researcher used five level likert scales to quantify starting one (strongly agree) to five (strongly disagree) for negative statement and five (strongly agree) to one (strongly disagree) for positive statement.

3.3 Data Type and Source

In this study, both primary and secondary data were used. The primary data were collected from the selected tax payers' respondents through questionnaires. The questionnaires incorporated both closed and opened ended questions.

While the secondary data are the name of comply and none comply tax payers and other important data are obtained from East Belessa Revenue Office through written documents (accounting record) and reports that related to tax service or activities.

3.4 Sample Size

The target population of this study is 874 category C tax payers of East Belessa Woreda which are frame work of three Keble's tax payers are 744 in number (East Belessa Woreda Revenue Office tax year- 2008.E.C).

The researcher used the Cochran/**1977**/ sample size determination formula.

$$no = \frac{z2.p.q}{e2} = \frac{(1.9)2.(.5=).(5)}{(.05)2} = 385$$

Given z=1.96, p=0.5, q=0.5 and e=.05

If the population is small then the sample size can be reduced slightly. So, the sample size ($n_{0)}$

Can be adjusted using the following equation (Cochran: 1977).

$$No= \frac{no}{1+(no-1)/N} = \frac{385}{1+(385-1)/874} = 267$$

Where N is the target population size and e is the acceptable marginal error for proportional being estimated. So, the sample size for this study is 267.

3.5 Sample Techniques

The category C tax payer stratified in to three groups because their category levels have the same for all kebeles and they have similar attitudes and cultures about taxation rules and regulation. So, the researcher used proportional stratified sampling technique to determine the sample size based on the number of kebele tax payers which was more representative. Then, the researcher used random sampling technique to select the participants from each stratum. From those 3 kebeles, category C total tax payers in each kebele with comply and non-comply or strata were distributed proportionally. The following table shows the sampling frame work of the study.

Table 1: The distribution of tax payers in sample categories

No	Kebele name	Comply tax payers	Non-comply Tax payers	Sample size		Percentage (%)	
				Comply	Not-comply	Comply	Not comply
1	Guahila	318	94	114	34	35.8	36.2
2	Hamusit	206	88	75	31	36.4	35.2
5	Taymen	23	15	9	4	39.	26.6
Total		547	197	198	69	36.2	35.

Source: own survey result (2017) .

3.6 Data Collection Instrument or Tools

A pre-tested structured questionnaire for primary data was adapted from different literatures. The questionnaires were prepared first in English and translated in to Amharic and then back into English to check consistency of the content. The final Amharic version of the questionnaires was used to collect the data.

3.7 The Definition of Variables

3.7.1 Dependent Variable

For this study, the dependent variable was tax compliance which is its outcome or results would be dichotomous as comply or otherwise. That is, if tax payers paid their tax liability on time and the actual amount at a given tax law, such tax payers were considered as comply or compliant tax payers. So, tax compliance was given =1. On the other hand, tax payers that did not pay their tax liability on time or under reported the actual amount at a given tax law and both, they were considered as not comply or non-compliant tax payers. So, it is given=0. Therefore, the two tax payers (comply and not comply) were distinguished through tax payer ledger /accounting recording/ from revenue office.

3.7.2 Independent Variable

The researcher identified the main explanatory as follows:

Age: age of tax payers in years. It was continues variable. The researcher hypothesized that age has positive impact on tax compliance.

Gender: this was a dummy for sex of tax payers and it took the value 1 if tax payer is male and 0 if the tax payer is female. The researcher hypothesized that the female tax payers are more compliant than male.

Religious: religion of tax payers which was category dummy variable**.** This study hypothesized that has impact on tax compliance .

Education: the tax payers' education status or level which is obtained by fiscal knowledge. It is categorical dummy variable. This study hypothesized that high education level has negatively impact tax compliance

Tax knowledge: awareness, understanding and information that have been obtained by training. The researcher hypothesized that the tax knowledge has positive impact on tax compliance

Income: - level of income or annual sales of tax payers. As the researcher hypothesized that level or annual sales of tax payers has negative relation to tax compliance.

Fairness: - Fairness means a tax system should be fair among individuals and taxes should be levied based on taxpayers' capacity. Horizontal equity means that taxpayers with the same income or wealth should pay the same amount of tax (tax burden) while vertical equity means that taxpayers with high income (capacity) should pay higher tax (tax burden). This study hypothesized that fairness has the positive relation to tax compliance.

Penalty rate: - punishment imposed or incurred for a violation of law or rule. It's to be measured as strengthening legal enforcements and penalties. This study hypothesized that the penalty has the positive relation to tax compliance.

Tax rate: - a percentage at which individual is taxed. This study hypothesized that tax rate has the negative relation to tax compliance.

Trust in the government spending: - tax payers perceive that the government spends the tax money on public good. This study hypothesized that trust in government has positive relationship to tax compliance.

Trust in public official: -it is employee of revenue authority. The tax payers perceive or trust the employee of revenue authority with regards to tax collection. The researcher hypothesized that trust in public official has positive relationship to tax compliance.

Complexity of tax system: it is a difficulty of tax system or tax laws are not easy to understand i.e. calculation of tax filling and paying date, tedious the procedural. The researcher hypothesized that Complexity of tax system has negatively relationship to tax compliance.

3.8 Model Specification

To test the hypothesis and establish the tax compliance of determinants, the researcher used the binary regression model. The model adapted from Gujarati (2004) with modification that can incorporate the determinants which were identified by the study. According to Gujarati (2004), there are three approaches to develop a probability model for a binary response variable:

1. The linear probability model (LPM)

2. The logit model

3. The probit model

The probability model, which expresses the dichotomous dependent variable (Yi) as a linear function of the explanatory variables (Xi), is called linear probability model (LPM). LPM has some econometric problems like non normality of the disturbances, heteroscedastic variances of the disturbances, non-fulfillment of $0 \leq (Yi/Xi) \leq 1$ and lower value of R^2, as a measure of goodness of fit. Therefore, linear probability model is not appropriate to test the statistical significance of estimated coefficients.

The logit and the probit models are the most frequently used models when the dependent variable happens to be dichotomous.

Liao (1994) revealed that the logit model has the advantage that these predicted probabilities could be arrived at easily. He also indicated that when there are many observations at the extremes of the distribution, then the logit model is preferred over the probit model. For statistical analysis, the logit model will be employed due to the nature of the decision variable; whether tax authority and taxpayers have gaps in tax collection or otherwise. For such a dichotomous outcome, the logit model is the most appropriate analysis tool. The logistic model considers the relationship between a binary dependent variable and a set of independent variables, whether binary or continuous variables.

Hence, the researcher was interested to use the binary logit model to identify the determinants of tax compliance. Thus, the estimation of the model was as follows:

Where **xi** is the explanatory or independent variable and if **pi** is the probability of tax payers' tax compliance y=1, otherwise y=0, if **1-pi** is the probability of tax payers' non tax compliance. So, the probability of tax payers' tax compliance equation would be:

$$\mathbf{pi}=\frac{1}{1+e^{-(\beta 1+\beta 2x1+\cdots \beta ixi)}} \qquad \text{equation (1).}$$

For the simplicity exposition, equation (1) rewrite as follows:

$$\mathbf{Pi}= \frac{1}{1+e^{-(ZI)}} =\frac{e^{2}}{1+e^{2}} \qquad \text{equation (2).}$$

Equation (2) represents the cumulative or logistic distribution function

On the other hand, the probability of non tax compliance (**1-pi**) was given as:

1-pi $=\frac{\mathbf{1}}{\mathbf{1+e^{zi}}}$ equation (3).

Therefore, $\frac{\boldsymbol{pi}}{\mathbf{1-pi}}=\frac{\mathbf{1+e^{zi}}}{\mathbf{1+e^{-zi}}}$ equation (4).

Equation (4) is simply the odds ratio of comply tax payers that is the ratio of the probability comply tax payers to the probability of non- comply tax payers.

When equation (4) changes into the natural log, it is as follow:

Li =Ln $\left(\frac{\boldsymbol{pi}}{\mathbf{1-pi}}\right)$ **= zi=** $\boldsymbol{\beta}\mathbf{1}+\boldsymbol{\beta 2 xi}+\cdots+\boldsymbol{\beta ixi}+$ **€i** equation (5)

Li= which is logit or the log of the odds ratio.

Xi= the name of independent variables which will be incorporated in the model

$\beta_{i=}$ which is coefficient of independent variables

€i= which is error terms

2.9 Diagnostics Test of the Model

Before fitting the logit model, it was important to check whether serious problem of multi-co linearity and association exists among and between the potential continuous and discrete explanatory variables of the model estimation, respectively. For this purpose, variance inflation factor (VIF) and contingency coefficient were used for the continuous and discrete variables, respectively.

According to Gujirati (1992) there are various indicators of multi-co linearity and no single diagnostic will give us a complete handle over the co linearity problem. Of the various indictors of multi-co linearity, the Variance Inflation Factor (VIF) is used in this study to check whether there is multi-co linearity or not among the continuous explanatory variables. A VIF value greater than 10 is used as a signal for the strong multi-co linearity and contingency coefficient ranges between 0 and 1that is the value of contingency coefficient less than 0.5 assumes weak association between the variables.

In addition to this, the model adequacy and Overall goodness of fit was tested that is model adequacy is carried out based on the hat square result. That is the p-value for hatsq is to be highly significant. The null hypothesis is that the model is not adequate and there are either missing variables or specification error.

Overall goodness of fit was tested using the Hosmer-Lemeshow method. That is the goodness of a model is reflected in a non-significant p-value. In other words, if the p-value is significant, the model is not good.

2.10 Data Quality Control

Reliability testing was used to test the appropriateness of questionnaire that would be employing in the study. Koul (2003) sates that the reliability test refers to the ability of that test to consistently provide the same results when repeated measurements are taken of the same individual under the same environment. In this study, The Cronbach Alpha method of internal consistency would be used to compute the reliability of the measures of the variables of the study used the various questionnaire items administered to respondents. Nunnally et al., (1994) stated that a value for Cronbach‟s alpha coefficient greater than 0.60 is considered acceptable.

In addition, to determine the reliability and insure validity of the instruments, pilot test were conducted with a small representative sample of 24 tax payers.

2.11 Data Processing and Analysis

The quantitative data were entered and cleaned by excel sheet soft ware and analyzed through **stata version12** soft ware.

Descriptive statistics is one of the techniques used to summarize information (data*)* collected from a sample. The descriptive statistic, like mean, standard deviation, percentage; distribution data table, etc were applied. In addition, t-test and chi square test were implemented in testing the statistical significance of mean differences between the dependent variable and independent for continuous and dummy variables respectively.

Secondly, the inferential statistics logit regression model is applied for dependent and independent variable (binary, multi category or continuous variables).

2.12Dissemination of the Results

The results of this study will be disseminated to Bahir Dar University, East Belessa Woreda Revenue Office and administer, as well as north Gondar Zone Revenue Department.

CHAPTER FOUR: RESULTS AND DISCUSSION

This chapter presents and discusses the results of the study. The first section of this chapter presents the descriptive statistics results of the study. This is followed by the discussion of the econometric model results.

4.1 Results of the Descriptive Statistics Analysis

The descriptive statistics analysis made use of tools such as mean, percentage, standard deviation and frequency distribution. In addition, t-test and Chi-square test statistics were employed to compare compliant and non-compliant groups with respect to some explanatory variables.

To achieve the objective of the study questionnaires were prepared to category c tax payers of East Belessa Woreda. 267(198 comply and 69 non-comply tax payers) questionnaires were distributed to these taxpayers out of whom 233(184 and 49) returned filled completely and properly. The total rate of response was 87%.

4.1.1 Demographic Factors

Sex

Out of the total 233 interviewed respondents 184 (79%) were compliant tax payers, and the remaining 49 (21%) were non-compliant tax payers. Above half of the respondents were found to be male constituting 66% and the remaining 34% were female respondents. The proportion of female headed tax payers were 37% for compliant and 25% for non-compliant tax payers. The Gender compliance level shows that female respondents were slightly more compliant than male 68(85% female Vs 116(76% male) when compared to the total average tax compliance level (79%). The chi-square test of sex distribution between compliant and non-compliant tax payers were run and the difference was found to be statically significant (**table 2**). It shows that sex has effect on tax compliance.

Religion

From the total respondents (233), only 13% of the respondents are Muslim and the rest 87% are orthodox. The religious compliance level showed that orthodox respondents were slightly more compliant than Muslim that is 161/202 (80% orthodox, 23/31(74% Muslim) when compared to the total compliance level (79%). The relation between religious and tax compliance is statically insignificant (**table2**). So, the result indicates that religion has no statically effect on tax compliance between compliant and non-compliant tax payers.

Table 2: Gender and Religion by Level of Compliance

Character	Non-compliant		compliant		x^2	total	
	Number	%	number	%		number	%
Gender					2.66		
Female	12	25	68	36.9		80	34
Male	37	75	116	63.1		153	66
Religious					0.4912		
Muslim	8	16.3	23	12.5		31	13
Orthodox	41	83.7	161	74.5		202	67

Source: own survey result (2017)

Age

Age of the tax payers of sample respondents ranged from 18 to 66 years with mean of 34.02146 and standard deviation10.16902. The average ages of compliant and non-compliant tax payers was found to be 34.33 and 32.85 years with the standard deviations of 10.17 and 10.16, respectively. The mean difference was found to be statistically insignificant (**table 3**).This result shows that the age of the tax payers has no statically effect on tax compliance between compliant and non-compliant tax payers.

Table 3: Age and Tax Compliance

	No-comply		compliant			total sample	
	(N =49)		(N=184)		T-value	(N=233)	
Character	Mean	Std. Dev.	Mean	std.dev.		Mean	std.dev.
Age	32.8571	10.1694	34.3315	10.1741	-0.9015	34.0215	10.1690

Source: own survey result (2017)

Education level

Out of total sample respondents (233), great majority 93(40 %) of the respondents were at primary education level, followed by 46(20%) and 45(19%) of respondents were at secondary and write and read education level respectively. The rest 22(9%), 25(11%) and 2(.8%) of respondents were illiterate, Certificate and diploma, and first degree and above respectively.

When the researcher sees the level of Compliance with education level as displayed in (table4), who write and read, who are at primary and Secondary school levels were found to be 80%, 80.65% and 82.6% respectively; which are slightly above the total compliance level (79%). On the other hand, certificate and diploma holders, and first degree and above were found to be72% and50% respectively; which is less compliant than the total compliance level (79%).

:**Table 4:** Education Level and Tax Compliance

Level	Non- comply taxpayer	compliant taxpayer	Total
Illiterate	6 (27 %)	16(73 %)	22 (100%)
Read & write	9 (20%)	36(80%)	45(100%)
Primary	18(19.35%)	75 (80.65%)	93(100%)
Secondary	8(17.5%)	38(82.5)	46(100%)
Certificate and diploma	7(28%)	18(72%)	25(100%)
First degree and above	1(50%)	1(50%)	2(100%)
Total	49(21%)	184(79%)	233(100%)

Source: own survey result (2017)

4.1.2 Non Compliance Opportunity Factors

Income Level

The average annual income or annual sales of respondents is 32,650 birr with the minimum and maximum of income are 2400 and 240,000 birr respectively. The average income of compliant tax payers is 35,285 birr, while that of non compliant tax payers is 22,758. The mean difference is found to be statistically insignificant (**table 5**).This result shows that the income of the tax payers has no statically effect on tax compliance between compliant and non-compliant tax payers.

Table 5: Income and Tax Compliance

	Non-comply (n=49)		compliant (n=184)			total sample (n=233)	
Character	Mean	Std. Dev	Mean	std.dev.	t-value	Mean	std.dev.
Income:	22,758	45,054	35,285	44,319	-1.75	32,650	44,671

Source: own survey result (2017)

4.1.3 Questions Related to Tax Knowledge and Obligations

Out of the total respondents, 187(80.3%) of the respondents responded that they know why they pay taxes.

Table 6: Knowhow the Tax Payers'

	No-comply taxpayers	compliant taxpayers	Total
No	30	16	46
	61%	8.7%	19.7 %
Yes	19	168	187
	39%	91.3%	80.3 %
Total	49	184	233

Source: own survey result (2017)

When the researcher sees the compliant and non compliant tax payers separately, 168 (91 %) of compliant tax payers responded that they know why they pay taxes. Whereas, 19(39%) of non compliant tax payers responded that they know why they pay taxes (**table6).** This result indicates that the majority (61%) of non-compliant tax payers do not know why they pay taxes .This may be the reason that they are not voluntary to pay tax.

To analyze the reason of paying tax, the researcher asked the respondents whether they know why they pay tax. Accordingly, 61(32.6%) of respondents testified that they pay tax in an obligation imposed by the government and 44(23.5%) of the respondents confirmed that they pay tax in the anticipation of public service. On the other hand, 50(26.7%) and 32(17%) of respondents indicated that they pay taxes to avoid disturbance and no opportunity to evade tax respectively (**table7**).It indicates that those taxpayers paying their tax liability for an obligation imposed by the government and the anticipation of public service are a positive understanding as to why people pay taxes. However, those taxpayers paying their tax liability to avoid disturbances and no opportunity to evade tax are a negative understanding as to why people pay taxes.

Table 7: The Reason for Paying Tax

	No comply	comply	Total
To avoid disturbance	5	45	50
	26.3	26.8	26.7
Anticipating of public service	4	40	44
	21	23.8	23.5
No opportunity	6	26	32
	31.5	15.5	17.00
It is government obligation	4	67	61
	21	34.00	32.600
Total	19	168	187

Source: own survey result (2017)

Particularly, those who pay taxes to avoid disturbances, their response indicate that they are not voluntary to pay their tax if there is no penalty or sanction. On the other hand, those whose response is "there is no opportunity to evade," indicates that they have the intention not to pay tax if they have the opportunity to do so or their compliance behavior is questionable. In general, there was a large tax knowledge gap between tax payers.

The researcher asked the respondents how often they attend education sessions about taxation. Out of the total (233) respondents, the majority of respondents 64(27.5%) responded that they attended three times a year, 58(25%) of respondents did not attend at all and 50(21.5%) of respondents attended once a year. The rest 44(19%) and 17(7%) of respondents confirmed that they attended the training session two times and four times a year respectively. As one can see (**table 8**) below, the compliant level was 36(62.07%), 34(68%), 39(88.64%), 58(90.63%) and 17(100%) of the respondents confirmed that they attended the training session none, once, two times, three times and four times respectively when compare to compliant and non-compliant tax payers for each training session.

Table 8: Education Session and Tax Compliance

	No- comply taxpayer		compliant taxpayers		Total	
Session	Number	%	Number	%	Number	%
None	22	37.93	36	62.07	50	100
Once	16	32	34	68	50	100
Two times	5	11.36	39	88.64	44	100
Three times	5	11.36	59	90.63	64	100
Four times	0	0	17	100	17	100
Total	49	21	184	79	233	100

Source: own survey result (2017)

This indicates that when the tax sessions (the awareness time duration) increases, the share of tax compliant level will increase. This might be due to the reason that those who know more about tax leads to tax compliance. The researcher asked the respondents why tax payers did not pay their tax on time and the actual amount. Out of the 233 participants, they responded that 144(62%), 147(63%), 154(23%), 108(46%) and 34(15%) unfairness of tax system, lack of awareness , no trust in government Spending, no face problem by doing so and expecting write off tax respectively (**table9**). This result indicates that the majority of both compliant and non complaint respondents responded that the negative perception on fairness of tax system, lack of awareness and no trust in government spending are the main reason why tax payers did not pay their tax on time and the actual amount

Table 9: Obligation of Tax Payment

Choice	Tax compliance group					
	Non compliance		Compliance		Total	
	tax payers	%	tax payers	%	Taxpayers	%
It is unfair	30	61	114	62	144	62
Lack awareness	29	59	118	64	147	63
No face problem	1	.2	53	29	54	23
No trust in government	23	33	85	46	108	46
Expecting write off tax	1	.2	33	18	34	15

Source: own survey result (2017)

4.1.4 Tax System or Structural Factors

Tax Rate

The researcher asked the respondents whether they believe that the existing tax rate is high. Accordingly, great majority 75% (57% agree and 18% strongly agree) of the respondents responded that the existing tax rate is high. On the other hand, about 20% (16.74 %) disagree, 3.86% strongly disagree) of the respondents responded that the existing tax rate is not high. The rest 4.9% of respondents answered neutral. When the researcher sees the compliant and non compliant tax payer's responses, those who agreed were 55.98% and 61.22 respectively (table10).in addition, the researcher asked the respondents whether they believe that the existing tax rate is fair so that it encourages tax compliance. Accordingly, great majority 81% (61.37% disagree and 18.8% strongly disagree) of the respondents responded that the existing tax rate is not fair. On the other hand, about 19% (16 % agree, 3% strongly agree) of the respondents responded that the existing tax rate is fair. This implies that the existing tax rate was heave perceived by the taxpayers. This perception may lead to decreases the level of tax compliance which in turn to decreases the revenue collected from taxpayers by increasing the collection cost.

Table 10: Tax Rate and Tax Compliance

	Non comply taxpayers		compliant taxpayers		Total	
	In number	%	in number	%	in number	%
Strongly disagree	0	0.00	9	4.89	9	3.86
Disagree	10	20.41	29	15.76	39	16.74
Neutral	0	0.00	10	5.43	10	4.29
Agree	30	61.22	103	55.98	133	57.08
Strongly agree	9	18.37	33	17.93	42	18.03
Total	49	100	184	100	233	100

Source: own survey result (2017)

Complexity of Tax System

Respondents were asked whether the tax laws are easy to understand and this encourages taxpayers to obey rules and regulations of tax. Accordingly, great majority 64 % (60.09% disagree and 4.29% strongly disagree) of the respondents responded that the tax rules and regulations are not easy to understand and this discourages tax compliance. On the other hand, about 26% (1.72% strongly agree and 24.03 % agree) of the respondents agreed that the tax rules and regulations are easy to understand and this encourages tax compliance. The rest 9.87% of respondents are neutral (table11) respectively. This result shows that the tax system was very complex to tax payers, specially, the payment date (short and no convenience) and this may leads to discourage taxpayers to pay their tax.

Table 11: Simplicity and Tax Compliance

	Non comply taxpayers		compliant taxpayers		Total	
Scale	In number	%	in number	%	in number	%
Strongly disagree	1	2.04	9	4.89	10	4.29
Disagree	31	63.27	109	59.24	140	60.09
Neutral	1	2.04	22	11.96	23	9.87
Agree	16	32.65	40	21.74	56	24.03
Strongly agree	0	0.00	4	2.17	4	1.72
Total	49	100	184	100	233	100

Source: own survey result (2017)

Penalty

Respondents were asked whether severe penalty rate for tax evasion results in high compliance. Therefore, about 65% of respondents agreed that the penalties imposed when an evasion is detected are severe so that compliance will increase. On the other hand, 28% of respondents responded that the penalties imposed when an evasion is detected are severe that compliance will decrease and the rest 8% of them were neutral (table12). This gives a direction for the tax authority that the severity of penalty imposed on any tax evasion has a positive impact on the level of compliance.

In addition, respondents were asked whether the penalty rate and enforcement undertaken by the tax authority is high and which results high compliance. Hence, about 70% of the respondents agreed that the penalty rate and enforcement undertaken by the tax authority is high and this results high compliance. The rest 23% of them disagreed and 7% of them answered neutral (**table13**).

Table 12: High Penalty and Tax Compliance

	No-comply		compliant		Total	
Scale	**number**	**%**	**number**	**%**	**number**	**%**
Strongly disagree	0	0.00	2	1.09	2	.86
Disagree	10	20.41	32	17.39	42	18.03
Neutral	6	12.24	9	4.89	15	6.44
Agree	25	51.02	104	56.52	129	55.36
Strongly agree	8	16.33	37	20.11	45	19.31
Total	49	100	184	100	233	100

Source: own survey result (2017)

Table 13: The Penalty Implementation and Tax Compliance

	Non compliance		compliant		total	
Scale	number	%	number	%	number	%
Strongly disagree	0	0.00	3	1.63	3	1.29
Disagree	10	20.41	42	22.83	52	22.32
Neutral	2	4.08	13	7.07	15	6.44
Agree	35	71.43	104	56.52	139	59.66
Strongly agree	2	4.08	22	11.96	24	10.3
Total	49	100	184	100	233	100

Source: own survey result (2017)

4.1.5 Attitude and Perception Factors

Trust in government spending

To see the effect of efficiency of public spending on the level of compliance, respondents were asked whether government provides good and services that market or private sectors do not provide and this encourage tax compliance**.** Accordingly, only 28% (27.04% and .86%) of the respondents agreed or believed that the government spends money on providing public goods and service which cannot be available in the market so that the compliance level of taxpayers will increase. On the other hand, about 70 %(50.21% and 19.74%) of the respondents disagreed that the government spends on providing public goods and service that enhances compliance and the rest 2% of respondents neither agreed nor disagreed (Table 14). This indicates that the majority of respondents have not trust in government spending.

Table 14: The Provision of Good and Service to Tax Compliance

	Non- comply taxpayers		compliant taxpayers		Total taxpayers	
Scale	number	%	number	%	number	%
Strongly agree	0	0.00	2	1.09	2	.86
Agree	24	48.98	39	21.2	63	27.04
Neutral	0	0.00	5	2.72	5	2.15
Disagree	18	36.73	99	53.8	117	50.21
Strongly disagree	7	14.29	39	21.2	46	19.74
Total	49	21	184	79	233	100

Source: own survey result (2017)

In addition, respondents were asked whether it is not so much wrong to hold back (evade) a little bit of taxes since the government spends too much unwisely. Thus 66 %(48.5% agreed and 18.8 % strongly agreed) of respondents believed or agreed that taxpayers should not comply the tax rules and regulations if the government is spending too much money unwisely. On the other hand, 27% (1.7% strongly disagree and 25.75disagree) of them did not-agree that taxpayers should not comply the tax rules and regulations if the government is spending too much money unwisely and the rest 5.15% of them remain neutral **(table15**). This indicates that if the government spends too much money unwisely, the majority of (66%) respondents agreed or perceived that it is not wrong to evade a little bit of taxes.

Table 15 : Unwisely Spends and Tax Compliance

	Non comply taxpayers		compliant taxpayers		Total taxpayers	
Scale	number	%	number	%	number	%
Strongly disagree	1	20.14	3	1.63	4	1.72
Disagree	20	40.82	40	21.74	60	25.75
Neutral	1	2.04	11	5.98	12	5.15
Agree	17	34.69	96	52.17	113	48.5
Strongly agree	10	20.41	34	18.48	44	18.88
Total	49	21	184	79	233	100

Source: own survey result (2017)

Trust in government official (employ)

To analyze the effect of trust in public officials on the level of compliance, respondents were asked whether the employees of tax authority never try to take more money from them. Therefore, around 60% (52% agree and 8% strongly agree) of the respondents replied that they had confidence on the employees of tax authority never try to take more money from them which in turn affects the compliance level of taxpayers. This implies that having a confidence on the officials has a great impact on the level of compliance. However, 37 %(30% disagree and 7strongly disagree) of the respondents did not have a confidence on the employees of tax authority and 3% were neutral (**table 16**). So the tax authority and any other responsible parties should pay emphasis to this area by preparing different programs which can divert the perception of the taxpayers and increase the confidence on them.

Table 16: Trust In the Employees of Tax Authority

	Non-comply taxpayer		compliant taxpayer		Total taxpayers	
Scale	number	%	number	%	number	%
Strongly disagree	3	6.12	15	8.15	18	7.73
Disagree	18	36.73	52	28.26	70	30.04
Neutral	1	2.04	6	3.26	7	3
Agree	26	53.06	96	52.17	122	52.36
Strongly agree	1	2.04	15	8.15	16	6.87
Total	49	100	184		233	100

Source: own survey result (2017)

Fairness

Regarding the fairness of the present tax system respondents were asked whether current tax system is not fair. Accordingly, around 65% (32.62% agree and 31.76% strongly agree) of the respondents perceived that the existing tax system is not fair and benefits only the rich and this discourages tax compliance. On the other hand, 31% (29.6% disagree and1.7% strongly disagree) of them agreed that the existing tax system is fair and benefits all and this encourages tax compliance. The remaining 4% of the respondents neither agreed nor disagreed with the fairness of taxation system (Table 17**).** This implies that majority of the taxpayers perceived that the tax system is not fair which discourages the level of compliance.

Table 17: Fairness and Tax Compliance

	Non-compliant taxpayer		compliant taxpayer		Total taxpayers	
Scale	number	%	number	%	number	%
Strongly agree	9	18.37	65	35.33	74	31.76
Agree	20	40.82	56	30.43	76	32.62
Neutral	1	2.04	9	4.89	10	4.29
Disagree	18	36.73	51	27.72	69	29.61
Strongly disagree	1	2.04	3	1.63	4	1.72
Total	49	100	184	100	233	100

Source: own survey result (2017)

4.2 The Results of Econometric Model

Binary logit model is used to identify potential socio economic determinants of tax compliance.

4.2.1Multi-Co Linearity Diagnostic Test

Multi-co linearity diagnostics test was done to check the presence of high co-linearity among and between each independent variable. **Annex 3** presents the value of VIF for each of the continuous variables were found to be smaller than 10. That is VIF for age is 1.29, income is 1.25, penalty is 1.24, tax rate is 1.33, complexity is 1.31, tax knowledge 1.14, trust in government is 1.18, trust in employee is 1.36, fairness is 1.54 and the average VIF is 1.38. Hence, the problem of multi-co linearity was not serious among the variables. Similarly, **Annex 4** presents the contingency coefficient values for each of the discrete variable was found to be lower than 0.5. So, this Annex shows that the existence of no serious association between the variables

4.2.2 Test of Model Adequacy

This test of model adequacy is carried out based on the hat square result. The null hypothesis is that the model is not adequate and there are either missing variables or specification error. That is the p-value for hatsq is to be highly significant. But it is insignificant (here the p-value for hatsq is 0.437).This suggests that the model is adequate. Therefore, it can be inferred that there are no missing variables and the model is specified correctly **(table18**).

Table 18: The Output of Adequacy Test

Logistic regression			Number of obs = 233
			LR chi2 (2) = 59.95
			Prob > chi2 = 0.0000
Log likelihood = -89.868798			Pseudo R2 = 0.2501
tc	Coef. .	Z	P>z
_hat	.8235044	3.07	0.002
_hatsq	.0838531	0.78	0.437
_cons	-.0155198	-0.07	0.948

Source: own survey data (2017)

4.2.3 Test of Overall Goodness of Fit

Overall goodness of fit was tested using the measure for goodness of fit for logistic regression. The goodness of a model is reflected in a non-significant p-value. The Hosmer-Lemeshow test p-value is 0.6296 which is insignificant (**table19**). This suggests that the overall fitness for our model is good. That means the model fits the data well. Based on these tests, regression result can be used for policy recommendation.

Table 19: The Output of Goodness-of-Fit Test

Number of observations =	233
Number of covariate patterns =	233
Pearson chi2 (216) =	208.54
Prob > chi2 =	0.6296

Source: own survey data (2017)

4.2.4 Data Quality Control

The total reliability coefficients (Alpha) of tax rate, penalty, fairness, complexity, trust in government spending and employee are determinants that affects tax compliance is described in **table 20.**

Table 20: Test of Reliability

Cronbach's Alpha (a)	Number of Items
.685	6

Source: own survey SPSS result (2017)

From the above table, the Alpha values of independent variables are well above 0.60. It shows that the reliability value was estimated to be α = .685 According to the result of the reliability test, the closer the Cronbach's Alpha is to 1, the higher the internal consistency reliability. As Nunnally et al., (1994) stated that a value for Cronbach"s alpha coefficient greater than 0.60 is considered acceptable. Then, it can be safe and sound assumed that the scales used by the research are reliable for data analysis and the pilot test had almost very good result. Therefore, the researcher can continue with the official questionnaire and the data is reliable.

Before starting the actual task, pre test was conducted 5% among unselected category c tax payers from both Guahala and Hamusit kebeles for 5 days. From both kebeles, 24 samples were taken and the results indicated that there were some problems of the distribution questionnaires. Then after, the researcher adjusted the final questionnaires.

Twelve variables were hypothesized to influence the tax compliance levels and all variables were entered in to the model. Out of the variables analyzed, the coefficients of six variables, namely sex, income, fairness, education level of degree and master, trust in government spending and tax knowledge significantly affected the tax compliance in the study area. The remaining variables (age, trust in public official, tax rate, penalty, complexity and religious) had insignificant effect on the tax compliance (**table21**)

Table 21: The Output of Marginal Effect
y = Pr (tc) (predict) = .87015453

variable	dy/dx	z	P>z	X
sex*	-.0958171	-2.17	0.030*	.656652
age	.0033474	1.38	0.168	34.0215
religi~s*	.0096745	0.15	0.878	.866953
tr	-.0151108	-0.49	0.623	3.7103
p	.0036502	0.13	0.893	3.64807
co	.0285669	0.88	0.379	3.22318
gt	.079499	3.43	0.001**	3.61516
emt	.024519	1.17	0.241	3.20601
lnincome	.0696678	3.65	0.000 **	9.63549
illite~e*	-.123112	-0.92	0.358	.094421
primary*	-.0246961	-0.37	0.712	.399142
second~y*	-.091282	-0.85	0.393	.197425
cert_dip*	-.1234029	-0.89	0.373	.107296
degr_mas*	-.6437592	-2.26	0.024 *	.008584
KNO_4	.0835984	4.52	0.000**	1.70815
fr	-.075004	-2.38	0.017 *	2.9206

**significant at 1% probability level, * significant at 5% probability level and variables such as sex*, religi~s* etc indicates that variables are dummy or category.

Source: own survey data (2017)

4.2.3 Determinants of Tax Compliance Interpretation

Sex: sex of the tax payers was significant at 5% significance level and negatively related to tax compliance in the study area. This implies that other things remaining the same, being male tax payers are less likely to be compliant than female tax payers by 9.5%. The possible explanation for this would be female tax payers are more compliant than male tax payers. This finding coincided with the researcher's hypothesis that the female tax payers are more compliant than male and it coincided with the finding of Wollela and Odd (2016) female respondents were more likely to show a complaint's attitude. Similarly, as Anima and Saniya (2015) attested, sex was found to be positive and significant that Women are found to be more compliant than men .In contrast, Michael's and Willy's (2015) findings on gender revealed that men are more compliant than women. According to Tilahun and yidersal (2014), the results revealed that gender of the tax payer has no impact on tax compliance behavior

Education: being first degree and above graduates were significant at 5% significance level and negatively related to tax compliance. This implies that, holding other things constant, being first degree and above makes tax payers less likely to be compliant than the tax payers who can only write and read by 64%. This may be due the educated tax payers may perceive that the amount of collected tax is not spent wisely to the economic development or the educated tax payers may dissatisfy the provision of goods and services by government. In addition to this, educated tax payers may have lack of tax knowledge because education level may not necessarily coincide with tax education and this is the reason that education level of taxpayers and tax education are tested separately as two independent variables. Laws are normally difficult to understand due to some jargons and terminologies, the same is true to taxation (McCaffery & Barron, as cited in Barbuta-Misu, 2011) which resulted taxpayers tend to misinterpretation or misunderstanding in tax laws and policies if there is lack of profound tax knowledge. On the other hand, they have better understand the opportunities for evasion and avoidance liability or with more understanding of tax system; they may misuse the knowledge to find ways searching for weaknesses and loopholes in the tax system and try to evade tax.

This finding is coincided with the researcher's hypothesis, i.e. higher education level has negative impact on tax compliance. In addition, the findings of Stulhofer (N.d.), as cited in Gërxhani (2007), indicated that tax noncompliance increases with high education level. On the other hand, Ross & McGee(2011) found that the higher the education level ones possesses, the higher the respect ones would pay to the laws and more opposed to tax noncompliance. This is because people can comprehend tax laws better with certain education level, hence, become more compliant as they realize their obligations and duties towards the government and even towards the country.

Income (transformed to log): the income of tax payers was significant at 1% significance level and positively related to tax compliance in the study area. This implies that other things remaining the same, as the income of tax payers increases, the probability of tax compliance will increase by 6.9%. This may be due to when the tax payers get more money; the ability of pay tax on time and the actual amount will be increased. In other words, when taxpayers have no disposable income, they may consume the return from the sales. This finding is in lined with the findings of Ross & McGee (2011), i.e. the higher income level, the more ones opposed to tax non-compliance. On the other hand, this finding is in verse with the researcher's hypothesis that higher level or annual sales of tax payers are less compliance than lower level income. Similarly, the findings of Nabei et al., (2011) indicated that on average increase in the taxpayer's income leads to low compliance. That means when the sale volumes increase, it leads to poor tax compliance. According to Chang and Jin (2003), taxpayers have the same degree of compliance regardless of their income levels.

Fairness: the perception of the fairness of tax system was significant at 5% and negatively related with tax compliance. This implies that, other things remaining the same, the perception of dissatisfaction or unfairness increases, the probability of tax compliance will decrease by 7.5%. This indicates that the fairness of tax system is perceived as it is not fair. In other words, positive perception of fairness increases the likely to be more tax compliance will increase. This indicates that the positive perception of fairness and tax compliant has directly relationship. This finding is in line with hypothesis that fairness and tax compliance has positive relationship. It also in line with the finding of Anima and Saniya (2015**),** i.e. the tax compliance and fairness of the tax system was found to have a positive relationship .This imply that as a perception of fairness increase, tax compliance will increase. In addition, Tilahun and yidersal (2014) also indicated that perception on equity and fairness of the tax system has positive relationship and significant impact on tax compliance.

Trust in government spending: the Perception on government spending of tax payers was significant at 1% significance level and positively related with tax compliance in the study area. This implies that, other things remaining the same, the trust of tax payers increase in government spending, the probability of tax compliance will increase by7.9%.The result indicated that the more the government spends the tax money on public goods, the more people will be willing to pay tax voluntarily and regularly. This finding is in lined with the hypothesis that trust in government has positive relationship to tax compliance. In addition, this finding coincided with the finding of Anima and Saniya (2015) perception on government spending has positive relationship and significant impact on tax compliance In contrast, as Beesoon et al., (2016), government spending didn't impact on the compliance behavior of tax payers in Mauritian country.

Tax knowledge: tax knowledge of tax payers was significant at 1% significance level and positively related with tax compliance. This implies that, other things remaining the same, the level of tax payers' awareness increases, and the probability of tax compliant will increase by 8.3%. This may be due to as taxpayers get enough tax knowledge with regards to why they are paying tax and what things are invested the collected revenue, they become more compliant as compare with those who have no or little tax knowledge. This finding is in lined with the researcher's hypothesis that the tax knowledge has positive impact on tax compliance. It is also in lined with the finding of Roshidi et al., (2007) tested and found that tax knowledge influences tax compliance positively. Similarly, Mohd and Ahmad **(**2011) revealed that tax knowledge has a positive significant impact on tax compliance. In contrast, Tilahun and yidersal (2014) revealed that tax education and compliance attitude have a negative relationship. That is a higher level of education was associated with a less compliant attitude.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATION

5.1Conclusions

In Ethiopia, there is a gap between taxes that have been planned to be collected and the actual tax collected. This is due to the non-compliance behavior of tax payers to tax rules and principles.

The descriptive statistics results indicated that the majority of both the compliant and non complaint respondents responded that the main reason why tax payers did not pay their tax on time and the actual amount was unfairness of tax system, lack of awareness and no trust in government spending.

It was found that the majority of respondents perceived that the tax system was not fair and equity. It indicates that individuals having equal income were not paying equal tax or not based on their ability to pay and this highly affects the taxpayers' motivation to be compliant. Majority of the respondents agreed or believed that the government spends money on providing public goods and service is no sufficient provision of social services by the government. That is, the tax payers perceived that their money was wasted or used for meaningless purposes.
With regards to tax knowledge, the survey data have shown that some of the taxpayers knew why they pay taxes, but they have no detail knowledge about taxation and the majority of non-compliant tax payers did not know why they pay taxes. This may be the reason that they were not voluntary to pay tax.

The binary logistic regression model used to identify factors influencing the tax compliance decisions. In this study, twelve determinants were analyzed whether they are significant determinants of tax compliance or not; they were sex, age religious, education income, tax knowledge, tax rate, Penalty rate, complexity of tax system, trust in public officials, fairness of tax system, and perception on government spending.
The results of binary logistic regression analysis suggested that tax compliance was significantly influenced by sex, education level of degree and master, income, tax knowledge, fairness and trust in government spending.

However, the remaining variables, i.e. age, religious, complexity of tax system, trust in public officials, penalty and tax rate were not found to be significantly correlated with tax compliance decisions during the period of the study.

The findings of the study showed that being male are negatively associated with tax compliance. That is, males are less compliant than females.

With regards to education level, the result indicated that the high level of education is negatively related with tax compliance. In other words, being degree or master level, they are less compliant than those who can only write and read. Moreover, the dissatisfaction perception of fairness was negatively associated with tax compliance. It shows that the dissatisfaction of tax payers on fairness is likely to be less compliance.

On the other hand, the level of income was positively associated with tax compliance. The result revealed that if the taxpayers' income increases, ones may have more respect to the tax law. Similarly, the tax knowledge was positively associated with tax compliance. It indicates that when the awareness of the tax payers increases, the compliance will also increase.

Lastly, the Perception on government spending of tax payers was positively related to tax compliance in the study area. The result indicated that the more the government spends the tax money on public goods, the more people will be willing to pay tax voluntarily and regularly.

5.2 Recommendations

Based on the study conducted using survey method, factors that determine taxpayers' voluntary compliance were identified and potential recommendations were forwarded. So, it may help the tax authority and other policy makers to approach the issue accordingly. No single approach is to be expected to fully and cost-effectively address noncompliance while multiple approaches are required in order to reduce tax gap.

Generally, understanding and identifying determinants that impact on taxpayers' behavior can help to develop targeted strategies which are related to tax noncompliance. Therefore, the following points are recommended to the tax authority and the local government.

Sex: being male tax payers and tax compliance are negatively related and 66% of respondents are male tax payers. So, the authority should pay attention to increase the male taxpayers' compliance level by creating sufficient awareness program.

Income: income level and tax compliance are positively related so that local government should motivate taxpayers to invest, work more through providing credit service, identifying income alternatives areas, maintaining the tax system should be fair.

Fairness: the most obvious condition for fairness of tax system is levying equal taxes on individuals who have equal income and each taxpayer should pay according to his ability- to pay. In addition, the authority should bring non taxpayers to tax system in order to ensure tax fairness. That's why the question of fairness is not only dealing with present taxpayers, but also concerned with people outside the tax system. The authority should also involve the taxpayers or their representatives while estimating the daily sales or revenue of taxpayers to address the question of fairness. The authority should have good information and follow up the moment of the business man activities in order to ensure fairness.

Tax knowledge: Taxpayers' knowledge about taxation should be updated continuously in order to improve the narrow awareness. The most effective tool for making people more positive is to empower them with knowledge. Taxpayers' attitude toward taxation is changed only through sustainable awareness creation programs. Awareness creation should go beyond simply giving tax education to taxpayers. It should be extended to consultative sessions with elderly, religious leaders, prominent personalities in the society or other influential individuals.

Government spending: if goods and services provision does not improve, the tax enforcement may challenge the legitimacy of the government. Improvement in service delivery for the majority of citizens is, therefore, a necessary condition to improve tax compliance. Thus, the local government has to provide social services to the public and it has to inform the taxpayers that these services are provided by their money.

For the future study: the researchers have to incorporate other variables such as peer influence (reference groups), income source and occupation, and they should use the qualitative research method because most determinants of this topic are Qualitative in nature. So, it was very difficult get in depth response in quantitative method. Therefore, the qualitative research may solve this problem easily.

REFERENCES

Abdulsalam, M. Nor. Aziah and Natrah Saad (2015) testing assumptions of the slippery slope using across country data: evidence from sub-Saharan Africa *.international journal of business and society*, vol.16, no.3, 408-421.

Ahangar, R. G, Bandpey, H.K, & Rokny, H.A, (2011) an investigation into the determinants of effective factors on tax evasion: empirical study of Iran tax affair organizations. *American journal of scientific research*, vol.20, 99-113

Alabede, J. O., Ariffin, Z. B .Z. & Idris, K.M (2011) determinants of tax compliance behavior. Propose model for Nigeria. *International research journal of finance and economic*s, 78.Retrieved May 2, 2017 from http://www.academia.edu/1424990/ Determinants of Tax Compliance Behavior A proposed Model for Nigeria

Allingham, M.G., & Sandmo, A. (1972) income tax evasion: A theoretical analysis. *Journal of economics, 1,323-338*

Alm, J., Jackson, B.R., & McKee (1992) estimating the determinants of taxpayer compliance with experimental data. *National tax journal*, 45(1), 107-114

Amina Ahmed and Saniya Kedir (2015) tax compliance and its determinants: the case of Jimma Zone, Ethiopia. *International journal of research in social science*, vol.6, No.2

Ay chirkos (2015) comparative study of compliant and non compliant taxpayers in Ethiopia from Amhara region.*pyrex journal of African studies and development* vol.1, issues 1,001-008.

Ayu fury puspita, Bambsubroto and zaki baridwan (2016) the analysis of individual behavior of corporate tax payers obedience tax compliance model (study of hotels in maulaning and batu. *rev, integrative business and economic*, vol. 5, no.3

Barbuta -Misu, N (2011) A reviews of factors tax compliance. *Economics and applied informatics*, 1, 69-79

Bee soon .D, Hemauvadipsoondram and Jugurnath.B (2016) assessing the determinants of income tax compliance in Mauritius: a study of individual’s tax payers. *Proceedings of the fifth Asia pacific conference on global business, economics, finance and social science*, paper ID: M626

BennoTorgler and Markus Schaffner (2007) tax compliance, tax moral and government quality. Working paper No, 2007-17

Berhe redae and shailinnder (ph.D) (2015), taxpayers' knowledge and tax compliance behavior in Ethiopia: a study of Tigray state. *International journal of management and commerce innovations,* vol.3, issues 2, 1090-1102.

Chang-Gyun park and Jin kwon Hyun (2003) examining the determinants of tax compliance by experimental data: a case of korea.Journal of policy modeling No. 25, 674-684

Chepfurui chebusit eat-l (2014) factors affecting tax compliance among small and medium enterprises in kitale town transnzoia country, Kenya. *International journal of recent research in commerce economic and management (IJRRCEM)*, vol.1, issues 3, 60-75.

Cochran, W. G. (1977), *sampling techniques*, third editions, new work, John Wiley & Sons.

East Belessa Woreda revenue office ledger document (2015/2016).

Edward E. Marandu, Chiristinan Mbekomize and Alex Ifezue (2014) determinants of tax compliance: A Review of factors and conceptualizations. *Proceeding of the first Middle East conference on global business, economics, finance and banking, paper ID-4110.*

Eiya o. Fiafoh, Ilaboya O.T.and Okoya .A. (2016) religiosity and tax compliance: empirical evidence from Nigeria. *Igbinedion university journal of accounting*, vol.1, No.27.

Erich Kirchler, Apolonia Niemirowski and Alexander Wearing (2006) shared subjective views, intent to cooperate and tax compliance: similarities between Australian tax payers and tax officer. *Journal of economics psychology*, vol.27, 502-517

Gerald chau and Patrick leung (2009), acritical review of fisher tax compliance model: research synthesis *.journal of accounting and taxation*, vol.1 (2), 034-040.

Gërxhani (2007) explaining gender differences in tax evasion: the case of Tirana, Albania. *Feminist economics*, vol. 13(2), 119-155

Gujarati, D. N. (2004*) basic econometric*, four editions, the McGraw-hill campanile, new work

Gunes cetin (2014) determining the factors that affect tax payers' perspective on tax administration: research in turkey. *International journal economic and finance studies*, vol.6, No.1

HMRC (2010) Managing civic tax investigations. *National audit office* retrieved January 1, 2017 from https://www.nao.org.uk /wp-content/upload/2010/12/1011677.pdf

James Alm and BennoTorgler (2006), culture differences and tax morale in the United States and in Europ.*Journal of economics psychology*, vol.27, 224-246.

James Andreoni, Brian Erard, and jona thafienstin (1998) tax compliance. *Journal of economic literature,* vol.36, No.21, 818-860

James, S. and Alley, C. (2004) tax compliance, self assessment and tax administration. *Journal of finance and management in public finance services*, vol. 2(2), 27-42

Kalle Hirvonen, Giulia Mascagni and keetie roelen (2016) linkage taxation and protection evidence on redistribution and poverty reduction in Ethiopia. United Nation University (UNU) wider working paper, 111

Kanybeck D.Nur-tegin (2008) determinants of business tax compliance. *The B.E journal of economic analysis and policy,* vol.8, issues 1.

Kirchler, E. Hoelzl and Wahl, l (2008) enforced verse voluntary compliance: the "slippery slope "framework. *Journal of economics psychology*, 29 (2), 210-225

Larisaa Margareta, Romona Anca and Loan Baterancea (2012b) understanding the determinants of tax compliance behavior as prerequisite for increasing public level. *The USV Annals of economic and public administration*, vol.12, issues 1(15).

Larisaa Margareta, Romona Anca, Bogdan Adrei and Loan Baterancea (2012a) review of administrative science. *Transylvanian,* No.36, 13-26

Lymer, A. and Oats, L. (2009) *taxation policy and practice,* 16th ed. Birmingham fiscal publication Retrieved April 15, 2017 from https://www.amazon.com/dp/ 1906201080

Michael, Ng'ang'a Thiga and Dr. Willy Muturi (2015), factors that influence compliance with tax laws among small and medium sized enterprises in Kenya. *International Journal of Scientific and Research Publications*, Vol. 5, Issue 6

Mohd Rizal palil (2010), tax knowledge and tax compliance determinants in self assessment system in Malaysian. University of Birmingham research Archive retrieved January 10, 2017 from https://core. ac. uk/download/pdf/76107/

Mohd Rizal palil and Ahmad fariq Mustapha (2011) factors affecting tax compliance behavior in self assessment system *.African journal of business management,* vol.5/33/,12864-12872.

Naibei, .K.L and .Siringi E.M. (2011) Impact of Electronic Tax Registers on VAT Compliance: A Study of Private Business Firms*. African research review of an International Multi-Disciplinary Journal, Ethiopia, Vol. 5 (1), Serial No. 18, 73-88*

Nelson Masko (2014), determinants of tax compliance by small and medium enterprises in Zimbabwe. *Journal of economics and international business research (JEIBR*), vol.2 (3), 4857

Nunnally, J.C., & Bernstein, I.H. (1994) *Psychometric theory third* edition, New York: McGraw-Hill.

Ramaswami Paramaswaran (2005), public finance and taxation retrieved January 10, 2017 from http: //etd.auu edu.et/bite stream/2333/

Ross, A. M. & McGee, R.W (2011) attitudes toward tax evasion: a demographic study of Malaysia. *Asian journal of law and economics*, 2(3), no.5

Samuel Almenew and p viswanadham (2016) tax fairness perception and tax compliance behavior: evidence from the metropolitan cities of the Amhara Regional state of Ethiopia. *International journal of science and research* (ijsr), vol.5, issues 4.

Shih- ying wu and Mei Jane teng (2005) determinants of tax compliance: across country analysis *Mohr siebeck*, vol.61, No (3), 393-417.

Slemrod, Joel and shalom Yitzhaki (2007) tax avoidance, evasion and administration. Hand book of public economics, 3, 1423-1470.Retrieved May 10, 2017 from https://elsa.berkeley.ed/saez/course/slemrod,yitzhaki%20PE%Handbook%20 chapter pdf

Tilahun Aemiro and yidersal dagnew (2014) determinants of tax compliance behavior in Ethiopia: the case of bahir dar city tax payers. *Journal of economic and sustainable development*, vol.5, No.15

Wollela Abehodie and odd helge (2016) business people's view of paying tax in Ethiopia. ICTD Working paper, 43

Workineh Ayenew (2016)determinants of tax revenue in Ethiopia (JOHANSEN-INTEGRATION APPROACH).*international journal of business, economic and management*,vol.3(6), 69-84.

Zemenu Tesafa and Dr Abdu mehamed Ali (2015) value added tax in Amhara national regional state in case of Bahir Dar city. *Journal of economic and sustainable development,* vol.6, No.21

ANNEXES

Annex 1: Logistic regression

Number of obs = 233, LR chi2 (16) =59.31 Prob > chi2 = 0.0000

Log likelihood = -90.189496 Pseudo R2 = 0.2474

tc	Coef.	Std. Err.	z	P>z	[95% Conf .Interval]	
sex	-.9342416	.4914975	-1.90	0.057	-1.897559	.0290758
age	.029627	.0215603	1.37	0.169	-.0126304	.0718844
religious	.0837027	.531299	0.16	0.875	-.9576242	1.12503
tr	-.1337407	.2720121	-0.49	0.623	-.6668745	.3993932
p	.0323069	. 2403979	0.13	0.893	-.4388642	.5034781
co	.2528363	.2869207	0.88	0.378	-.309518	.8151905
gt	.7036205	.2084634	3.38	0.001	.2950397	1.112201
emt	.2170099	.1867895	1.16	0.245	-.1490909	.5831106
lnincome	.6166073	.1718222	3.59	0.000	.2798419	.9533726
illiterate	-.8526603	.7643678	-1.12	0.265	-2.350794	.6454731
primary	-.2149797	.5744423	-0.37	0.708	-1.340866	.9109066
secondary	-.6925667	.7133008	-0.97	0.332	-2.090611	.7054772
cert_dip	-.8592072	.7970565	-1.08	0.281	-2.421409	.7029949
degr_mas	-3.140925	1.631755	-1.92	0.054	-6.339107	.0572569
KNO_4	.7399033	.1758172	4.21	0.000	.395307	1.084499
fr	-.6638368	.271516	-2.44	0.014	-1.195998	-.1316752
_cons	-7.084922	2.225912	-3.18	0.001	-11.44763	-2.722214

Annex 2: Variables

tc	tax compliance
sex	sex of respondents
age	age of respondents
religious	religious of respondents
tr	tax rate
p	penalty
co	complexity of tax system
gt	trust in government spending
emt	trust in employ
lnincom	respondents of income level
illiterate	education level of respondents
primary	education level of respondents
secondary	education level of respondents
cert_dip	certificate or diploma education level of respondents
degr_mas	degree or master education level of respondents
KNO_4	ax knowledge of respondents
fr	fairness of tax system

Annex 3: Variance Inflation Factor

Variable	VIF	1/VIF
primary	1.97	0.508353
secondary	1.93	0.518105
cert_dip	1.67	0.597824
fr	1.54	0.648705
illiterate	1.45	0.687666
emt	1.36	0.734691
tr	1.33	0.752907
co	1.31	0.762970
age	1.29	0.775404
lnincome	1.25	0.799546
p	1.24	0.804898
gt	1.18	0.844816
sex	1.15	0.867880
KNO_4	1.14	0.874192
degr_mas	1.13	0.886152
religious	1.08	0.927742

Mean VIF 1.38

Annex 4: Coefficient Contingency Test of Dummy Variable

	sex	religi~s	religi~s	illite~e	writ_r~d	primary	second~y	cert_dip	degr_mas
sex	1.0000								
religious	-0.0171	1.0000							
religious	-0.0171	1.0000	1.0000						
illiterate	-0.0756	0.0401	0.0401	1.0000					
writ_read	0.0332	-0.0004	-0.0004	-0.1580	1.0000				
primary	0.1648	0.0096	0.0096	-0.2632	-0.3988	1.0000			
secondary	-0.0501	-0.0597	-0.0597	-0.1602	-0.2427	-0.4042	1.0000		
cert_dip	-0.1874	0.0133	0.0133	-0.1119	-0.1696	-0.2826	-0.1719	1.0000	
degr_mas	0.0673	0.0365	0.0365	-0.0300	-0.0455	-0.0758	-0.0461	-0.0323	1.0000

Annex 5: Correlation test

	tc	sex	age	religi~s	tr	p	co	gt	emt	lnincome	illite~e	primary	second~y	cert_dip
tc	1.0000													
sex	-0.1070	1.0000												
age	0.0592	0.1485	1.0000											
religious	0.0459	-0.0171	-0.0203	1.0000										
tr	0.0311	-0.0367	-0.0252	0.0893	1.0000									
p	0.0216	-0.0228	0.0251	-0.0947	0.1091	1.0000								
co	0.0325	0.0442	-0.0046	0.1670	0.2652	0.1291	1.0000							
gt	0.1570	0.0262	-0.0956	0.1069	0.2970	0.0485	0.2275	1.0000						
emt	0.0549	-0.1278	-0.0474	0.0042	0.3334	0.2227	0.2249	0.0782	1.0000					
lnincome	0.1966	0.1010	-0.0529	0.0441	0.0994	0.0768	-0.0929	0.0305	-0.0301	1.0000				
illiterate	-0.0495	-0.0756	0.2626	0.0401	0.0916	0.1071	0.0389	0.0069	0.0687	-0.0601	1.0000			
primary	0.0335	0.1648	0.0734	0.0096	-0.1409	-0.0489	0.0861	-0.0254	-0.1212	0.0191	-0.2632	1.0000		
secondary	0.0443	-0.0501	-0.2359	-0.0597	0.1425	0.0024	0.0032	0.1379	0.1340	0.0531	-0.1602	-0.4042	1.0000	
cert_dip	-0.0593	-0.1874	-0.2426	0.0133	0.0931	-0.1167	0.0074	0.0319	0.1288	-0.1230	-0.1119	-0.2826	-0.1719	1.0000
degr_mas	-0.0661	0.0673	-0.0644	0.0365	0.1238	0.0926	0.0917	0.0985	0.0234	0.1774	-0.0300	-0.0758	-0.0461	-0.0323
KNO_4	0.3215	-0.1901	-0.0818	0.0578	0.0520	0.0986	0.0258	-0.0415	0.1723	0.1275	-0.0968	-0.0934	0.1527	0.0565
fr	-0.0793	0.0602	-0.1306	0.0825	0.2243	0.3471	0.3023	0.1751	0.3303	0.2694	0.0389	-0.0890	0.0273	0.0570

	degr_mas	KNO_4	fr
degr_mas	1.0000		
KNO_4	-0.0507	1.0000	
fr	0.0909	0.0801	1.0000

Annex 6: Questionnaire

Bahir Dar University

Department of Economics

Tax payer Survey Questionnaire

Interviewer Name -------------------------------------

Name of the Kebele -----------------------------------

Date of Interview --------------------------------------

Lengths of interview ----------------------------------- (write start and end time)

Tax payer Code (sample group 1 for compliance and 2 for non compliance) ------------------

Supervisor: Michu Woreket

Instruction to the Interviewer: Read the following to the respondent:

How are you, I am---------------.I am working as data collector for the study being conducted by Michu Woreket for the partial fulfillment of his the master of degree in applied development economics Bahir Dar University.

The main objective of his study is to identify the major determinants of tax compliance in East belessa woreda. The research is going to carry out on your response and other important information that could support it.

So, your frank and valuable support in responding to the questions raised is very important to the success of the study. Your ideas and comments are highly respected and kept confidential and strictly used for academic purpose only. The interview will take a few minutes and you should choose the answer you think is correct according to your understanding. Thus, I request you to fill the questions carefully and at your best knowledge in all regard.

Thank you very much in advance for your cooperation and for devoting your valuable time.

PART ONE- socio demographic factors (put the '√' in the box your choice).

1. How old are you? -----------------

2. What is your gender? 1. Male 2. Female

3. What is your religion? 1. Orthodox 2.Muslim 3.Protestant 4. Other

4. What is your education level?

1. No educated 2. Write and read only

3. Primary education 4. Secondary education

5. Certificate or diploma 6. Degree /Master

PART TWO- Questions related to taxpayers' general knowledge about taxation

1. Do you know why you pay tax**? 1.** Yes **2.** No

2. If your answer is yes, why do you pay tax? (Multiple responses is possible)

1. To avoid disturbance(penalties and sanctions)
2. In anticipation of public services
3. There is no opportunity to evade
4. It is an obligation to wards the government
5. other, specify --

3. Do you think that having good tax knowledge encourage tax compliance? 1. Yes 2. No

4. How often you are attending education sessions about taxation?

1. Four times per year 2.Three time a year

3. Twice a year 4.Once a year 5.Not at all

PART 3- Questions related to taxpayers' tax obligation.

1. Why tax payers living in your locality are willing to pay their tax on time and the actual amount? (Multiple choice possible)

1. It is fair or based on their ability
2. They have a good awareness
3. They may have sufficient disposal income
4. They trust in government spends on the public services

5. Others, specify ---
----

2. Why tax payers living in your locality are not willing to pay their tax? (Multiple choice possible)

1. It is unfair/ beyond their ability
2. Lack of awareness
3. They no face problem by doing so
4. They have no trust in government spends on the public services
5. Expecting the amenity or write off

6. Others, specify ---

Note For positive statement likert scale order from 5 to 1 for strongly agree to strongly disagree where as for negative statement 1to 5 for strongly agree to strongly disagree

PART 4- **Questions related to tax system authority or structure**		Rating scale				
		Strongly agree	agree	Neutral	disagree	Strongly disagree
	Tax rate					
1	Tax rates are so heavy that tax evasion is an economic necessity for many to					

	survive.					
2	The tax rate is fair and equitable which enhance tax compliance					
	Penalty rate					
1	If the penalties imposed when an evasion is detected are so severe, tax compliance will increase					
2	The penalty rate and enforcement undertaken by the tax authority is which results in high compliance					
	Complexity tax system					
1	Tax laws are easy to understand i.e. calculation of tax filling and paying date, this encourage tax compliance					
2	I find tedious the procedural complication and to maintain my relevant records, this leads me not to comply with the tax laws.					
Part 5. - **Questions related to attitude and perception**						
	Fairness of tax system					
1	The present tax system is not fair, this discourage tax compliance					
2	I do not believe that the tax I am paying is fair and based on my income					

	Trust in government spending					
1	The composition of public spending provides necessary goods and services that the market does not provides, this encourages tax compliance					
2	It is not so much wrong to hold back a little bit of taxes since the government spends too much anyways.					
3	Tax evasion is ethical even if most of the money collected is spent wisely					
	Trust in the public official					
	I am confident that the employees of tax authority never try to take more money from me than they should; this encourages me to comply with the tax law.					
2	I can depend on the employees of tax authority to keep accurate tax records; this encourages me to comply with the tax law.					

Part 6 income and expenditure

How much your monthly sale income on average? ----------------What about your monthly expenditure or cost? ---------------

Thank you for your quick cooperation!!