FACTORS INFLUENCING TAX COMPLIANCE ATTITUDE IN ETHIOPIA: A MULTIVARIATE ANALYSIS

Tilahun Aemiro Tehulu
Assistant Professor, Department of Accounting and Finance, College of Business & Economics, Bahir Dar University, Ethiopia

Abstract
The purpose of this paper is to empirically investigate how tax education and demographic factors (gender, age, education level, income level, and religion) influence tax compliance attitude in Ethiopia where tax mobilization is the lowest among most African countries. Ordered Logistic regression, one-way ANOVA, two samples and one sample T-test are used in this study in examining the determinants of tax compliance attitude. The results show that taxpayers in Ethiopia particularly in Bahir Dar City Administration have high tax compliance attitude. Moreover, the univariate analysis revealed that the overall tax compliance attitude was not affected by gender, tax category, and age of the tax payer. However, the religion of the taxpayer is found to have a significant influence on tax compliance attitude. The ordered logistic regression result has also indicated that three variables namely educational background, religion and taxpayers’ knowledge regarding the role of tax in national development explain the variation in tax compliance attitude in Ethiopia. Other factors including age of the taxpayer, income and taxpayers’ knowledge about rights and responsibilities and offences and penalties are not important variables in explaining tax compliance attitude.

Keywords: Tax compliance, Taxpayers, Ethiopia.

1. Introduction
Government requires financial resources to operate as a government and play a role that is expected from it by the public. In this regard James and Nobes (2000) state that taxation is one method of transferring resources from the private to the public sector. The role of taxes as an instrument stabilizes the economy, and reduces private demand when resources are released for public sector use. Taxes are not payments for some special privilege granted or services rendered and are, therefore, distinguishable from various other charges imposed for particular purposes under particular powers or functions of government (Murphy & Higgins, 2001).

The main purpose of imposing certain taxes on the public is to generate revenues for the government for public expenditure (Singh, 1999; Shanmugam, 2003; and Lymer, and Oats, 2009). Taxes are fundamental to the existence of governments, for the tax revenues help to finance the bulk of services that governments provide including education, welfare, public safety, infrastructure, and other basic public services. Improved tax compliance amplifies the
revenues available for supporting public services without increasing the current tax burden on compliant taxpayers (Bird and Casanegra de Jantscher, 1992).

It is obvious that any government requires 100% compliance on tax mobilization, if possible. However, there is a significant gap between the amount of tax that is theoretically collectable from economically active persons and that which is actually collected. In this regard, in Ethiopia, as in some other developing countries, tax noncompliance is a serious challenge facing income tax administration and hindering tax revenue performance. Evidences show that a large portion of revenue has been earned from the penalties and interest, and charges have been filed on those cases of noncompliance and this indicates the existence of noncompliance risk at Ethiopian Revenue and Custom Authority (Alemayehu, 2010).

When we consider the tax to GDP ratio of selected African Countries as reported in a Tax Administration workshop in Kenya, Ethiopia’s tax mobilization has been the lowest.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Tax-to-GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>2005/06</td>
<td>17.7</td>
</tr>
<tr>
<td>Zambia</td>
<td>2005</td>
<td>17.0</td>
</tr>
<tr>
<td>Malawi</td>
<td>2005/06</td>
<td>15.6</td>
</tr>
<tr>
<td>Rwanda</td>
<td>2006</td>
<td>14.1</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2005/06</td>
<td>12.9</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2005/06</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Source: Tax Administration workshop, Nairobi, Kenya, November 3-7, 2008

Tax compliance has been an important subject of research in a large number of developed and a number of developing countries. In this regard, the results of various studies indicate that tax knowledge (Chan et al, 2000; Singh, 2003; Lewis, 1982; Collins et al, 1992; and Palil, 2010) and demographic variables (Chan et al, 2000, Richardson, 2008; Mohd, 2010; Richardson, 2006; Loo, 2006; Torgler, 2007; Clotfelter, 1983; Dubin et al, 1987; Mohani, 2001; Chung and Trivedi, 2003; Beron et al, 1992; Tittle, 1980; Wärneryd and Walerud, 1982; and Wahlund, 1992) appear to be an important element in tax compliance. However, the results were not consistent which calls a test in the Ethiopian context since studies aimed at assessing the same were missing. Eriksen and Fallan (1996) also stated that knowledge about tax law is assumed to be important for preference and attitudes towards taxation. However, they stated that there is little research that explicitly considers how attitude towards taxation is influenced by specific knowledge of tax regulations which shows the value added of our study.

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 also appear to vary among countries (Palil, 2010). In connection with this, there is virtually no study done to investigate the determinants of tax compliance in Ethiopia. Berhane (2011) studied the influence of tax education on tax compliance attitude. Tehulu and Dinberu (2014) also investigated the determinants of tax compliance attitude. However, these studies didn’t employ a rigorous statistical test. They employed descriptive statistics and therefore, unable to control the impact of other variables. The latter study was also based on small observations. The impact of specific tax knowledge variables on tax compliance has not also been addressed in these studies. Therefore,
this study investigates how tax education and demographic variables (gender, age, education level, income level, and religion) influence tax compliance attitude.

2. Related Literature Review

2.1 Definition of Tax Compliance

Tax compliance has been defined in various ways by various authors. For example, Kirchler (2007) stated that compliance might be voluntary or enforced compliance. Voluntary compliance is made possible by the trust and cooperation between tax authority and taxpayer and it is the willingness of the taxpayer on his own to comply with tax authority’s directives and regulations. However, in the presence of distrust and lack of cooperation between authority and taxpayer, which creates tax hostile climate, authorities can enforce compliance through the threat and application of audit and fine. Alm (1991) and Jackson and Milliron (1986) defined tax compliance as the reporting of all incomes and payment of all taxes by fulfilling the provisions of laws, regulations and court judgments. Another definition of tax compliance is a person’s act of filing their tax returns, declaring all taxable income accurately, and disbursing all payable taxes within the stipulated period without having to wait for follow-up actions from the authority (Chan et al, 2000)

Franzoni (2000) stated that compliance with tax laws involves true reporting of the tax base; correct computation of the tax liabilities; timely filling of tax returns and timely payment of the amount due as tax. Any behavior by the taxpayer contrary to the above constitutes noncompliance. According to McBarnett (2003), compliance may take three forms, which include committed compliance, capitulative compliance and creative compliance. Committed compliance is the willingness to discharge tax obligations by taxpayer without complaining. While capitulative compliance is the reluctant in discharging of tax obligations by taxpayer and creative compliance (tax avoidance) refers to any act by taxpayer aimed at reducing taxes by redefining income and deductible expenditure within the confine of the law. However, according to Arogundade (2005) and Sandmo (2005) there is conceptual distinction between tax evasion and tax avoidance. The distinction between these two concepts hinges on the legality of taxpayer’s actions. Sandomo (2005) distinguishes the two concepts from legal perspective. According to him tax evasion is carried out in violation of the law, therefore is illegal while tax avoidance is carried out within the legal framework of the tax law in order to reduce one’s tax liability, therefore tax avoidance is legal. Since there have been many studies attempting to define tax compliance, for the purpose of this study, (based on Alm (1991) ; Jackson and Milliron (1986), Kirchler (2007), Franzoni (2000), and Pali (2010) tax compliance is defined as taxpayers’ willingness to comply with tax laws, declare the correct income, claim the correct deductions and exemptions, and pay all taxes on time.

Tax noncompliance is the failure of taxpayer to meet tax obligations whether the act is done intentionally or unintentionally (Loo, 2006; Mohani, 2001; and Allingham and Sandmo, 1972). Soos (1991) and Krichler (2007) broadly classified noncompliance as failing to file a tax return; underreporting of taxable income; overstating tax claims such as deductions and exemptions and failing to make timely payment of tax liability. Therefore, for the purpose of this study, tax noncompliance is defined as failure to comply with tax laws and/or report incorrect income, the act of claiming incorrect deductions and exemptions and/or paying the incorrect amount of tax beyond the stipulated time frame.
2.2 Determinants of Tax Compliance
In this section we will discuss theoretical and empirical literature on determinants of tax compliance, namely tax knowledge and demographic variables.

2.2.1 Tax Knowledge
Taxation knowledge is necessary to increase public awareness especially in areas concerning taxation laws, the role of tax in national development, and especially to explain how and where the money collected is spent by the government (Mohd, 2010). More importantly, it is necessary that current and future taxpayers are exposed to the roles that they could play in developing the country. This exposure could be given through seminars, dialogue sessions, or collaboration with the Ministry of Education to introduce the subject of Taxation at secondary schools (Mohani, 2001).

According to Chan et al. (2000) greater education is directly linked to a likelihood of compliance. Educated taxpayers may be aware of non compliance opportunities, but their potentially better understanding of the tax system and their higher level of moral development promotes a more favorable taxpayer attitude and therefore greater compliance. Taxpayers who have attended a tax course would be expected to have better tax knowledge and tax compliance attitude in comparison with taxpayers who have never attended a tax course (Mohd, 2010). Hite and Hasseldine (2003) highlighted that tax authority need to emphasize teaching tax courses because of impact of education on compliance.

According to Berhane (2011), assisting tax payers by improving the flow and quality of information or educating them (eg. TV campaigns) into becoming more responsible citizens has the potential to yield greater revenue than if it were spent on enforcement activities. A theoretical economic model introduced by Allingham and Sandmo (1972) has clearly indicated that penalties have an impact on tax compliance. The higher the penalty the greater the discouragement for potential tax evasion. Greater education potentially increases compliance, as educated taxpayers may be more aware of their responsibility as well as the sanctions to be imposed if they were not compliant with tax laws. Since previous studies indicate that penalty rates impact upon tax compliance behavior, the awareness of offences was presumed to have a significant influence as well. If the taxpayers are aware of the offences they are committing when evading tax and the consequences of being non compliant taxpayers, they might reduce their tendency to evade tax. On the other hand, if they are not aware of the implications of being dishonest in terms of the offence they are likely to be charged with if caught, they might be more inclined to cheat because they presume that they will not be detected and could save money. Thus, educating taxpayers and keeping them well informed with the sentences of being an evader may be important, as a prevention measure is better than cure (Mohamad Ali et al, 2011).

Previous studies have evidenced that general tax knowledge has a very close relationship with taxpayers’ ability to understand the laws and regulations of taxation, and their ability to comply with them (Singh, 2003). Lewis (1982) also found that low tax knowledge correlates with negatives attitude toward taxation. Collins et al (1992) on the other hand produced a contradict result in their study in the United States from a random mail survey of 700 households and 220 usable responses, they found that tax knowledge and the level of education were negatively correlated with compliance behaviour. However, according to Alm (1991) there are no comparable experiments focusing on how better specific tax knowledge affects attitudes towards taxation.
2.2.2 Demographic Variables

Jackson and Milliron (1986) listed several factors that have influenced tax compliance as discussed by various researchers. These factors include age, gender, education and income among others. Chan et al. (2000) suggested that those with a higher education level are more likely to have a higher level of moral development and higher level attitudes toward compliance and thus will tend to comply more. One of the measures to increase voluntary compliance is by assuring that taxpayers have a certain level of qualifications, ability and confidence to exercise their tax responsibility (Mohani, 2001). In contrast, the most recent study by Richardson (2008) cited in Mohd (2010), revealed that there is a negative association between education and compliance. Regarding gender Hasseldine and Hite (2003) found that female taxpayers were more compliant than males. Mohamad Ali et al. (2007) cited in Palil (2010) and Palil (2010) also reported that females were more compliant in their study. In contrast, Richardson (2006) suggested that gender has no significant impact on compliance across a study of 45 countries.

In a country where income redistribution is not satisfying the higher income group tends to evade more (Mohani, 2001) because the high income earner might feel betrayed and unfairly treated. Loo (2006) found that high income earners in Malaysia are prone to evading tax while Torgler (2007) reported that lower income earners in Western Germany were less compliant. Palil (2010) also found a significant positive relationship between income level and tax compliance. Demographic factors like age have been researched by many researchers and findings are not consistent. For example Tittle (1980); Warneryd and Walerud (1982) and Wahlund (1992) posit negative association-older people are less compliant. In contrast, Palil (2010); Clotfelter (1983); Dubin et al (1987); Mohani (2001); Chung and Trivedi (2003) and Beron et al (1992) argued that age was positively related with compliance. However, there have been a number of studies which found no relationship between age and compliance (Spicer and Lundstedt, 1976; Spicer and Becker, 1980; and Porcano, 1988). In a study made by Palil (2010) religion produced significant difference particularly regarding knowledge about responsibility which may in turn influence tax compliance. In a nutshell, the results of various studies indicate that tax knowledge, and demographic variables appear to be an important element in tax compliance. However, still the results are not consistent and this is one rational behind the present study. 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 (Palil, 2010). In connection with this, there is virtually no study done to investigate the determinants of tax compliance in Ethiopia. Prior studies done in Ethiopia didn’t employ a rigorous statistical test and analysis was made just based on descriptive statistics and therefore, unable to control the impact of other variables. The impact of specific tax knowledge variables on tax compliance has not also been addressed in prior studies. Therefore, to fill these gaps, this study tried to investigate how tax education and demographic variables (gender, age, education level, income level, and religion) influence tax compliance using multivariate analysis.

3. Data and Methodology

3.1 Data and Sampling Design

This study employed primary data, specifically, survey methods of data collection. The survey data was gathered using questionnaire. This study compiled the questions from different sources. Questions on the dependent variable (tax compliance) were based on Palil (2010), Troutman (1993) and Chan et al (2000) with some modification to suit the country’s context. Questions on tax knowledge were based on Berhane (2011) and Income tax proclamation 286/2002 of
Ethiopia. Survey methods help to capture attitudes or patterns of past behavior. In here the researcher may ask respondents questions once or over time. However, in this study cross sectional design was employed since past data was not secured. The target population of the study was unincorporated category A and B business income tax payers in Bahir Dar City Administration. The target total population is 1316 as of September 2011. It was impossible to consider the population as respondents to this survey due to impracticality, time and cost. Therefore, in this study 600 questionnaires were distributed to a sample of 600 tax payers and 387 usable responses were received and analyzed. These usable responses are believed to be representative of the population.

3.2 Method of Data Analysis
The data analysis is organized in two sections. Section 1-Descriptive statistics of variables including demographic variables, the level of tax knowledge, tax compliance and the relation between some profile of respondents and tax compliance; Section 2-exploring the determinants of tax compliance using the various specific tax knowledge variables. The data is analyzed using T-test, One Way ANOVA and Ordered Logistics Regression. T-test was used to examine the significant differences between two means; One Way ANOVA to examine the significant differences among three or more means and Ordered Logistics Regression was employed to assess the determinants of tax compliance attitude.

3.3 Variable Measurement and Model Specification
3.3.1 Tax Compliance (The Dependent Variable)
In this study tax compliance was measured using seven hypothetical questions. It was developed based on Palil (2010), Troutman (1993) and Chan et al (2000) with some minor modification to suit the country’s context. The use of hypothetical questions can increase reliability of results and minimizes respondents’ dishonesty when answering the questionnaire (Troutman, 1993). This section requires the respondent to rate each hypothetical question whether as a taxpayer they would undertake the same action if they faced the same situation using ‘very low probability’ to ‘very high probability’, using a Likert Scale of 1 to 5 respectively. Summative scale was employed to derive a value for tax compliance. Since the items that make up tax compliance were framed negatively, reverse coding was made for the analysis. Therefore, the maximum score of this variable was 35 (high compliance) and the minimum score is 7 (low compliance). The items that make up the scale include 1) probability of being audited; 2) perception on government spending; 3) perception on equity and fairness of the tax system; 4) penalties; 5) financial constraint; 6) changes on current government policies; and 7) referral group (friends, relatives etc.).

3.3.2 The Independent Variables and Their Measurement
3.3.2.1 Tax Knowledge
Following Berhane (2011) and Income tax proclamation 286/2002 of Ethiopia the level of tax knowledge was measured using eleven questions. The first three questions relate with the level of knowledge on responsibilities and rights of a taxpayer. The next seven questions relate with the level of knowledge on awareness of offences and penalties and the remaining one question was on knowledge about the role of taxes in national development. The scope of tax knowledge questions was limited to eleven questions to make the questionnaire manageable. Following Palil (2010) who employed five-point Likert scale to assess the level of tax knowledge, this section requires respondents to answer using options ranging from the scale of 1 (if you think you are definitely aware) to the scale of 5 ((if you think you are definitely unaware). In the regression
analysis, the three types of tax knowledge variables were included separately to see which forms of tax knowledge influence tax compliance attitude.

### 3.3.2.2 Demographic Variables
This section includes demographic variables such as gender, age, educational background, income, and religion. These variables were also independent variables so that an association between these demographic variables and tax compliance attitude could be examined. In prior studies, demographic variables like gender, age, education level and income level also appear to potentially have their own influence on tax compliance and hence the need to test in the Ethiopian context since study results differ from country to country.

### 3.3.3 Model Specification
Data was analyzed using ordered logistic regression and the base line model used to assess the relationship between tax knowledge, various demographic variables and tax compliance attitude was as follows:

\[ P(TC) = \beta_1 TNRR + \beta_2 TNOP + \beta_3 TNRT + \beta_4 REL + \beta_5 INC + \beta_6 AGE + \beta_7 EDU \]

Where:
- TC – Tax compliance attitude
- REL – Religion of the taxpayer
- INC – Income level of the taxpayer
- AGE – age of the taxpayer
- EDU – Education level of the taxpayer
- \( \beta_1, \beta_2,...,\beta_7 \) – Coefficient of the independent variables

In the regression analysis, an attempt is made to incorporate variables that allow to identify which tax knowledge variables (elements) significantly influence tax compliance behavior. Eriksen and Fallan (1996) claimed that no study has been done to examine which parts of tax knowledge have the greatest impact on attitude toward taxation. Three forms of tax knowledge namely tax knowledge about responsibilities and rights (TNRR), tax knowledge about offences and penalties (TNOP) and knowledge about the role of taxes in national development (TNRT) were considered.

### 4. Results and Discussions
Using 387 usable responses from 600 questionnaires distributed, this section presents and discusses demographic characteristics of respondents, tax knowledge and tax compliance attitude and its determinants analyzed with the help of some descriptive statistics namely one sample T-test, two samples T-test and one way ANOVA and Ordered logistic regression.

#### 4.1 Descriptive Statistics

**1. Demographic Variables**
In this study 70.03% of the respondents were male and 29.997% were female which shows that the variability in gender is enough to make meaningful analysis since the proportion of female participants was significant.

Regarding age, a significant proportion of the respondents (68.73%) were within the age range 26 to 45. The majority of respondents (78.3%) have also at least completed secondary school. While 17.57% of the respondents have just completed primary school, 4.13% were non-educated. Finally, the study also shows that 52.46% of the respondents were Christians and the remaining (47.54%) were Muslims.

**2. Tax Knowledge**
As shown in Table 4.1 below, the findings of the study revealed that taxpayers’ knowledge regarding their rights and responsibilities as a taxpayer and about role of tax for a nation is found
to be high. More specifically, they are highly aware that informing and declaring actual income received from all sources to the tax authority, keeping records/documents pertaining to income and expenditure for a period of ten years after submission of the tax return and paying taxes due within the prescribed period from the date of issue of the Notice of Assessment or within the stipulated period is their rights and responsibilities.

Table 4.1: One Sample T-test Regarding Tax Knowledge Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observation</th>
<th>Mean</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNRR</td>
<td>387</td>
<td>7.289</td>
<td>-12.9175</td>
<td>0.000</td>
</tr>
<tr>
<td>TNOP</td>
<td>387</td>
<td>21.261</td>
<td>0.9915</td>
<td>0.322</td>
</tr>
<tr>
<td>TNRT</td>
<td>387</td>
<td>2.287</td>
<td>-11.871</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Questionnaire

Taxpayers are also highly aware that tax collected by the government is spent for defense, maintenance of laws, construction of schools, hospitals and other public services for the common benefit of all peoples. However, their knowledge regarding offenses and penalties is slightly below moderate. The taxpayers do not have adequate knowledge about offences and penalties including penalty for failure to file a timely tax declaration, penalty for understatement of income tax, and penalty for failure to keep proper records.

The study also shows the overall knowledge was not dependent on gender (t = -0.0686; Pr(t) = 0.9453) and income tax category (t = 0.7524, Pr(t) = 0.4522). The one-way ANOVA also revealed that taxpayers’ knowledge was not dependent on educational background (F=1.66, P(F)=0.1431). On the other hand, the level of tax knowledge significantly varies by religion (t=-1.8066, P(t)=0.0716) and age (F=2.43, P(F)=0.0474). Christians are found to have relatively more knowledge than Muslims. Regarding age, the level of tax knowledge increases as age increases especially within age range of 26 to 55. Tax payers with age above 55 have exceptionally and relatively low level of tax knowledge and those with age between 18 and 25 have exceptionally the highest level of tax knowledge.

3. Tax Compliance Attitude
As shown in Table 4.2 below, an attempt has also been made to examine the influence of probability of being audited; perception on government spending; perception on equity and fairness of the tax system; penalties; financial constraint; changes on current government policies; and referral group (friends, relatives etc.) on tax compliance behavior using one sample T-test. The results show that taxpayers in Bahir Dar City Administration have high tax compliance attitude. More specifically, the level of their tax compliance attitude was not influenced by probability of being audited, perception on government spending, perception on equity and fairness of the tax system, penalties, financial constraint, changes on current government policies and referral group (friends, relatives etc.). This shows that other factors (other than the seven factors stated in Table 4.2) account for tax non-compliance.
Table 4.2: One Sample T-test Regarding Tax Compliance Attitude Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observation</th>
<th>Mean</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prob. Of Audited</td>
<td>387</td>
<td>2.9457</td>
<td>0.322</td>
</tr>
<tr>
<td>Gov. Spending</td>
<td>387</td>
<td>3.664</td>
<td>0.000</td>
</tr>
<tr>
<td>Fairness</td>
<td>387</td>
<td>3.659</td>
<td>0.000</td>
</tr>
<tr>
<td>Penalty</td>
<td>387</td>
<td>3.703</td>
<td>0.000</td>
</tr>
<tr>
<td>Fin. Constraint</td>
<td>387</td>
<td>3.695</td>
<td>0.000</td>
</tr>
<tr>
<td>Policies</td>
<td>387</td>
<td>3.514</td>
<td>0.000</td>
</tr>
<tr>
<td>Referral</td>
<td>387</td>
<td>3.504</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Questionnaire

The results further revealed that the overall tax compliance attitude was not affected by gender of the tax payer (t=0.0588, Pr (t) =0.9531). This result is consistent with the finding of Richardson (2006) who found that gender has no significant impact on compliance across a study of 45 countries. The two sample t-test and one way ANOVA result also show that tax payers’ tax compliance attitude was not influenced by tax category of the taxpayer (t=-0.1722, Pr (t) = 0.8634), age of the taxpayer (F=0.61, Prob > F=0.6589), and educational background (F=0.69, Prob > F=0.6307). However, the religion of the taxpayer is found to have a significant influence on tax compliance attitude (t=1.3121, Pr (T > t) = 0.0951). Christian taxpayers have higher tax compliance attitude than Muslim taxpayers. This may be explained by the fact that Christians are found to have relatively more knowledge than Muslims which may cause Muslims to have lower tax compliance attitude (see Table 4.3 for the results).

Table 4.3: Demographic Factors' Impact on Tax Compliance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observation</th>
<th>t/F value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>387</td>
<td>0.0588</td>
<td>0.9531</td>
</tr>
<tr>
<td>Tax Category</td>
<td>387</td>
<td>-0.1722</td>
<td>0.8634</td>
</tr>
<tr>
<td>Age</td>
<td>387</td>
<td>0.61</td>
<td>0.6589</td>
</tr>
<tr>
<td>Educational Background</td>
<td>387</td>
<td>0.69</td>
<td>0.6307</td>
</tr>
<tr>
<td>Religion</td>
<td>387</td>
<td>1.3121</td>
<td>0.0951</td>
</tr>
</tbody>
</table>

Source: Questionnaire

4.2 Regression Results

This section presents and discusses the Ordered Logistic regression results regarding the determinants of tax compliance attitude. The regression results focusing on the relationship between tax compliance attitude and certain selected explanatory variables are presented in Table 4.4 below.
Table 4.4 Ordered logistic regression results

<table>
<thead>
<tr>
<th>Dependent Variable: Tax Compliance Attitude</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>Z</th>
<th>P&gt;z</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>.0019091</td>
<td>0.0947271</td>
<td>0.02</td>
<td>0.984</td>
</tr>
<tr>
<td>EDU</td>
<td>-.1540011</td>
<td>0.0852729</td>
<td>-1.81</td>
<td>0.071</td>
</tr>
<tr>
<td>REL</td>
<td>-.3284656</td>
<td>0.1877596</td>
<td>-1.75</td>
<td>0.08</td>
</tr>
<tr>
<td>INC</td>
<td>.0193948</td>
<td>0.0602986</td>
<td>0.32</td>
<td>0.748</td>
</tr>
<tr>
<td>TNRR</td>
<td>.0247247</td>
<td>0.0347966</td>
<td>0.71</td>
<td>0.477</td>
</tr>
<tr>
<td>TNOP</td>
<td>.0166184</td>
<td>0.0179861</td>
<td>0.92</td>
<td>0.356</td>
</tr>
<tr>
<td>TNRT</td>
<td>-.2277334</td>
<td>0.080412</td>
<td>-2.83</td>
<td>0.005</td>
</tr>
</tbody>
</table>

The results show that explanatory power of the model is reasonably high (Prob > chi2=0.05) and three variables namely educational background, religion and taxpayers’ knowledge regarding the role of tax in national development explain the variation in tax compliance attitude in Ethiopia. Other factors including age of the taxpayer, income and taxpayers’ knowledge about rights and responsibilities and offences and penalties are not important variables in explaining tax compliance attitude.

The findings of this study show that educational background has a negative and statistically significant impact on tax compliance attitude at 90% confidence interval. This indicates that when there is an improvement in educational background of the taxpayer, a decline in tax compliance attitude could be expected. This result is consistent with the findings of Collins et al (1992). Using a random mail survey of 700 households and 220 usable responses in the United States, they found that tax knowledge and the level of education were negatively correlated with compliance behaviour. Another study by Richardson (2008), cited in Mohd, (2010), also revealed that there is a negative association between education and compliance.

The regression results also revealed that religion of the taxpayer has a negative influence on tax compliance attitude at 90% confidence interval. Christian taxpayers have relatively higher level of tax compliance attitude compared to Muslim taxpayers. This may be explained by the fact that Muslim taxpayers have relatively lower level of tax knowledge which may impact negatively on their tax compliance attitude. In a study made by Palil (2010) religion produced significant difference particularly regarding knowledge about responsibility which may in turn influence tax compliance.

Taxpayers’ knowledge about role of tax in national development has a positive impact on tax compliance attitude. The result is statistically significant at 99% confidence interval. The results provide evidence that creating awareness to taxpayers about the role of tax in national development helps to enhance tax compliance attitude. Taxpayers’ knowledge about responsibilities and rights and offences and penalties has no significant impact on tax compliance attitude.
Age and income of the taxpayer have also no significant influence on tax compliance attitude. This result is similar with a number of studies which found no relationship between age and compliance (Spicer and Lundstedt, 1976; Spicer and Becker, 1980; and Porcano, 1988).

5. Conclusions and Implications
5.1 CONCLUSIONS
Using ordered logistic regression, one-way ANOVA, two samples and one sample T-test, this study examined the determinants of tax compliance behavior in Ethiopia particularly in Bahir Dar city administration. The findings of the study revealed that taxpayers’ knowledge regarding their rights and responsibilities as a taxpayer and about role of tax for national development is found to be high. More specifically, they are highly aware that informing and declaring actual income received from all sources to the tax authority, keeping records/documents pertaining to income and expenditure for a period of ten years after submission of the tax return and paying taxes due within the prescribed period from the date of issue of the Notice of Assessment or within the stipulated period is their rights and responsibilities. They are also highly aware that tax collected by the government is spent for defense, maintenance of laws, construction of schools, hospitals and other public services for the common benefit of all peoples. However, their knowledge regarding offenses and penalties is slightly below moderate. The taxpayers do not have adequate knowledge about offences and penalties including penalty for failure to file a timely tax declaration, penalty for understatement of income tax, and penalty for failure to keep proper records.

The results show that taxpayers in Bahir Dar City Administration have high tax compliance attitude. More specifically, the level of their tax compliance attitude was not influenced by probability of being audited, perception on government spending, perception on equity and fairness of the tax system, penalties, financial constraint, changes on current government policies and referral group (friends, relatives etc.). This shows that other factors (other than the seven factors stated here) account for tax non-compliance.

The univariate analysis further revealed that the overall tax compliance attitude was not affected by gender, tax category, and age of the taxpayer. However, the religion of the taxpayer is found to have a significant influence on tax compliance attitude. Christian taxpayers have higher tax compliance attitude than Muslim taxpayers.

The ordered logistic regression result has also indicated that three variables namely educational background, religion and taxpayers’ knowledge regarding the role of tax in national development explain the variation in tax compliance attitude in Ethiopia. Other factors including age of the taxpayer, income and taxpayers’ knowledge about rights and responsibilities and offences and penalties are not important variables in explaining tax compliance attitude.

5.2 IMPLICATIONS
On the basis of the findings of the study, the following practical recommendations are made:

- The level of tax compliance is encouraging but still there is the potential for further enhancement in the compliance level. This could be done by providing further tax education to taxpayers since taxpayers’ knowledge about tax particularly knowledge
regarding role of tax in national development impacts on tax compliance attitude positively.

- The findings also revealed that religion of the taxpayer has a significant impact on tax compliance attitude. Given our findings, one plausible explanation for variation in the tax compliance attitude of taxpayers with different religion is a difference in the level of their tax knowledge. Therefore, providing tax education could be partly a solution to the problem. In addition, further studies are needed to identify the various other reasons that might have caused variation in tax compliance attitude between taxpayers of different religion.
- The results of the study have also indicated that taxpayers’ knowledge about role of tax in national development has a positive impact on tax compliance attitude. Therefore, the revenue office of the region can enhance tax compliance by providing additional tax education.

REFERENCES


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