Determinants of Tax Compliance Behavior in Ethiopia: The Case of Bahir Dar City Taxpayers

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Abstract
In the Ethiopian government five year Growth and Transformation Plan, it has been 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. The country's tax mobilization was also the lowest among most African countries and thus, identifying the factors that determine tax compliance behavior has been open for empirical investigation. Accordingly, using 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 data was collected using structured questionnaire. The results revealed that perception on government spending; perception on equity and fairness of the tax system; penalties; personal financial constraint; changes on current government policies; and referral group (friends, relatives etc.) are factors that significantly affect tax compliance behavior. However, gender and probability of being audited have no significant impact on tax compliance behavior. Finally, the findings show that 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.
Keywords: Compliance behavior, Tax payers, Ethiopia.

1. INTRODUCTION

A tax is a compulsory levy and those who are taxed have to pay the sums irrespective of any direct corresponding return of services or goods by the government. Government needs financial resources to act as a government and play a role that is expected from it by the public (Bhatia, 1976; James, 2000). So what the government gives it must first take away. The economic resources available to society are limited, and so an increase in government expenditure normally means a reduction in private spending. In this regard James (2000) states 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 and Higgins, 2001).

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 & Casanegra, 1992).

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 (Palil, 2010).

One measure used to determine a country's tax mobilization (tax compliance) is tax as a percentage of GDP. When we see the tax to GDP ratio of selected African Countries as reported in a Tax Administration workshop in Kenya, Ethiopia's tax mobilization is the lowest.

Country	Year	Tax-to-GDP
Kenya	2005/06	17.7
Zambia	2005	17.0
Malawi	2005/06	15.6
Rwanda	2006	14.1
Tanzania	2005/06	12.9
Ethiopia	2005/06	12.2

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

The Ethiopian government had developed a five year Growth and Transformation Plan and 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. However, to the best of the researchers' knowledge virtually no study has been made to assess the determinant of tax compliance in Ethiopia particularly in Bahir Dar City. Therefore, the objective of the study is to identify factors affecting tax compliance behavior in Bahir Dar City Administration.

2. RELATED LITERATURE REVIEW

While this study aims to fill gap in the existing literature by assessing the determinants of tax compliance, this section reviews previous literature in tax compliance. Specifically, first we provide the definition of tax compliance. Then second reviews of theoretical and empirical literature on the determinants of tax compliance are presented.

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
(Singh, 2003).

Franzoni (2000) and Chatopadhyay and DasGupta (2002) 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), Chatopadhyay and DasGupta (2002) and Palil (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 (James & Alley, 2004, Loo 2006; Mohani, 2001; Kesselman, 1994 and Allingham and Sandmo, 1972). Soos (1991) and Kirchler, (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 non-compliance 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

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) 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 significant number of studies which found no relationship between age and compliance (Spicer and Lundstedt, 1976; Spicer and Becker, 1980 and Porcano, 1988).

Previous studies also revealed that 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.) are also important factors in assessing tax compliance behavior (Palil,2010; Troutman,1993; and Chan et al, 2000).

3. RESEARCH DESIGN AND METHODOLOGY

This chapter discusses the research design and methodology used in the study, more specifically, nature of the data, sample and sampling techniques, method of data collection and analysis, and variable measurement.

3.1 Nature of the Data

The objective of this study is to examine the factors that influence tax compliance and to this end a quantitative research approach was used. There are three approaches available for researchers to design their research methodology namely quantitative, qualitative and mixed methods research approaches (Creswell, 2003).

The primary criterion to be considered for selecting an approach is the research problem (Ibid). In view of this, quantitative approach is best if the problem is identifying factors that influence an outcome, or understanding the best predictors of outcomes. This approach is also best to test a theory or explanation. However, a qualitative approach is advisable if a concept or phenomenon needs to be understood because little research has been done on it. This approach is exploratory so that superior when the researcher does not know the essential variables to examine. Therefore, to study determinants of tax compliance quantitative data is more appropriate.

3.2 Sample and Sampling Techniques

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 was 1,316 in number as of September 2011. It is impossible to consider the population as respondents to this survey due to impracticality, time and cost. Thus, in this study, 201 usable questionnaires were obtained and used for the analysis.

3.3 Method of Data Collection and Analysis

This study employed primary data, specifically, survey methods of data collection. The survey data was gathered using questionnaire. 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.

3.3.1 Questionnaire Design

The survey questionnaire was prepared in both Amharic and English versions to help reduce the impact of language barriers. This study compiled the questions from different sources. Questions to assess tax compliance behavior were based on Palil (2010), Troutman (1993) and Chan et al (2000) with some modification to suit our country's context.

The data collected using structured questionnaire was analyzed using T-test, and One-Way ANOVA. T-test was used to examine the significant differences between two means while One-Way ANOVA was employed to examine the significant difference among three or more means.

3.5 Variable Measurement

In this study tax compliance was measured using seven hypothetical questions. It was based on Palil (2010), Troutman (1993) and Chan et al (2000) with some modification to suit our country's context. The use of hypothetical questions can increase reliability of results and minimizes respondents' dishonesty when answering the questionnaire (Troutman, 1993). The respondents were asked 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. The items that made 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.).

Other items include demographic variables such as gender and age. These variables were independent variables so that an association between these demographic variables and tax compliance 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.
Age will be divided into eight groups: 18-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, and 56 and above.

4. Results and Discussions

In this section data analyzed using T-test and one-way ANOVA is presented and discussed as follows. The results are based on 201 usable questionnaires collected. See Table 4.1 below to see the impact of gender on tax compliance behavior. The results revealed that gender of the tax payer has no impact on tax compliance behavior. More specifically, the level of tax compliance behavior as measured by the seven hypothetical questions was not dependent on gender. 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.

Table 4.1: Two Sample T-test on Significance of Gender

Variable	Gender	Obs	Mean	Sig.
Prob. of Audited	Male	142	2.993	0.4429
	Female	59	2.864	
Gov. Spending	Male	142	3.479	0.4947
	Female	59	3.61	
Fairness	Male	142	3.817	0.7562
	Female	59	3.763	
Penalty	Male	142	3.901	0.9133
	Female	59	3.881	
Fin. Constraint	Male	142	3.493	0.791
	Female	59	3.441	
Policies	Male	142	3.528	0.5015
	Female	59	3.408	
Referral	Male	142	3.606	0.1393
	Female	59	3.322	

Source: Questionnaire

Table 4.2: One way ANOVA Result (Age)

Variables	Source	SS	Df	Prob > F
Prob. of Audited	between groups	7.1159	4	0.1903
	within groups	225.48	196	
Bartlett's test for equal variances: chi2(4) = 2.0453 Prob>chi2 = 0.727				
Gov. Spending	between groups	4.21	4	0.6044
	within groups	301.979	196	
Bartlett's test for equal variances: chi2(4) = 2.3454 Prob>chi2 = 0.673				
Fairness	between groups	10.166	4	0.0876
	within groups	241.874	196	
Bartlett's test for equal variances: chi2(4) = 3.7003 Prob>chi2 = 0.448				
Penalty	between groups	1.702	4	0.8785
	within groups	279.104	196	
Bartlett's test for equal variances: chi2(4) = 4.7163 Prob>chi2 = 0.318				
Fin. Constraint	between groups	5.735	4	0.4721
	within groups	316.415	196	
Bartlett's test for equal variances: chi2(4) = 4.1932 Prob>chi2 = 0.380				
Policies	between groups	13.378	4	0.0404
	within groups	256.861	196	
Bartlett's test for equal variances: chi2(4) = 1.5187 Prob>chi2 = 0.823				
Referral	between groups	2.111	4	0.8505
	within groups	304.038	196	
Bartlett's test for equal variances: chi2(4) = 3.4420 Prob>chi2 = 0.487				

Source: Questionnaire

However, the one-way ANOVA result tells us that 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 (See Table 4.2 above). For other tax compliance assessment items, opinion of tax payers was not dependent on age. One assumption in one-way ANOVA test is homogeneity of variance and the Bartlett's test for equal variances shows that the assumption is fulfilled.

As shown in Table 4.3 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 probability of being audited is not an important factor in determining tax compliance behavior. One explanation could be that prior audits may not turn out as badly as is feared by taxpayers as stated in Andreoni et.al. (1998). Nevertheless, 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.) are factors that significantly affect tax compliance behavior.

Table 4.3: One Sample T-test Regarding the Significance of Other Variables

Variable	Observation	Mean	Sig.
Prob. Of Audited	201	2.955	0.557
Gov. Spending	201	3.517	0.000
Fairness	201	3.801	0.000
Penalty	201	3.896	0.000
Fin. Constraint	201	3.478	0.000
Policies	201	3.493	0.000
Referral	201	3.522	0.000

Source: Questionnaire

This shows that if the government doesn't use its resources for the welfare of its people and the tax system is not equitable and fair, no severe penalties, adverse changes in government policies including increases in fuel prices, electricity and water rates, personal financial constraint of tax payers and if there are referral group (friends, relatives etc.) pressures, compliance behavior of the tax payers can be negatively affected.

5. Conclusions

Using 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 results revealed that perception on government spending; perception on equity and fairness of the tax system; penalties; personal financial constraint; changes on current government policies; and referral group (friends, relatives etc.) are factors that significantly affect tax compliance behavior. However, gender and probability of being audited have no significant impact on tax compliance behavior. Finally, the findings show that 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.

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