

The Influence of Tax Education on Obeying Tax Liability: A Statistical Methods and Results

Tizazu Toma Shamana^{1*} and Woldeselassie Azige Alito¹

¹Department of Statistics, Natural and Computational Science, Wolaita Sodo University, Ethiopia.

Authors' contributions

Both authors designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

Backgrounds: In Ethiopia, taxpayers are categorized as small, medium or large depending on their business turnover or levels of income. Irrespective of one's category, taxpayers in Ethiopia, particularly Wolaita Sodo town are required to comply with VAT, TOT, Income Tax, Withholding Taxes and Customs duties in equal measure. Taxpayers will readily accept any new system introduced if they have ample knowledge to understand the system. Thus, education programs organized by custom and duty authority or public education institutions are required to enhance taxpayers' ability to understand the importance of tax on country's economic development and to increase their confidence in fulfilling their responsibilities as taxpayers. By considering the above issues, the researcher interested to investigate the influence of tax education on tax compliance attitude of taxpayers by conducting an experiment on the taxpayer in Wolaita Sodo town. The general objective of the study was to investigate the influence of tax education on tax compliance in Wolaita Sodo town.

Methods: The target population for the survey study was actual taxpayers who are subject for business income tax. Only unincorporated business taxpayers in Wolaiata Sodo town are used as participants in the survey study. The target total population is 11,278 business income taxpayers as of July 2017 which is categorized under A, B and C. Only 160 taxpayers were selected by using simple random sampling from Wolaiata Sodo town. Questions regarding employment income, business income, turn over tax, and excise and value-added taxes are asked. Respondents are also asked to state whether the direct cost of producing the income, such as the direct cost of

*Corresponding author: E-mail: tizazutoma36@yahoo.com;

manufacturing, purchasing and selling costs shall be deductible from gross income in calculating taxable business income. Before and after the experiment (tax education) respondents were asked to check whether they know basic taxation rules. And their marks scored for the 7 basic questions after and before tax education out of 50 marks are recorded.

Results: Majority of the respondents after attending the tax course scored high value regarding the tax knowledge. There is a great difference between the tax compliance attitude of these respondents before and after attending the tax course. Before attending the tax course, majority of respondents showed the plan of not complying with tax laws. But after attending the tax course, the majority of the respondents proves the identification of taxable and non-taxable income types. Generally, it resulted that the tax knowledge of respondents is improved after attending the tax course.

Keywords: Tax liability; statistical results; wolaita Sodo; Ethiopia.

ABBREVIATIONS

ETR : Electronic Tax Registers;

VAT : Value Added Tax;

ERCA: Ethiopia Revenue and Customs Authority;

HELB : Higher Education Loans Board;

SAS : Self Assessment System;

TOT : Turn over Tax;

1. INTRODUCTION

The taxpayer education program is one of the strategies for improving service delivery to taxpayers. Improving service delivery is critical to enhancing voluntary tax compliance. Lack of voluntary tax compliance compels revenue authorities to use costly and coercive methods for tax enforcement [1]. Thus, taxpayer education is a tool designed to enable taxpayers to understand tax laws and procedures. It involves training of special units within the revenue departments, for providing education, counseling and support to the taxpayers, through different media which include newspapers, television, radio programs, websites, seminars, and front desk help to disseminate key information to the taxpayers.

1.1 Backgrounds of the Study

Tax is defined as a compulsory levy imposed by a government or a government-appointed body (tax authority) on income, expenditure, or capital assets, for which the taxpayer receives nothing specific in return. On the other hand, the tax may be viewed as a cost to the taxpayer whether as an individual or a corporate body. However, there is a conflict in taxation whereby taxpayers' desire to minimize costs and maximize profit, while the government desires to maximize revenue through enhanced tax compliance. To strike a

balance between the taxpayer and the tax collector, the latter need to come up with strategies and methods of simplifying tax procedures and requirements. One such strategy is the use of enhanced taxpayer education [2]. Andreoni, Erard, and Feinstein [3] claimed that tax compliance should be defined as taxpayers' willingness to obey tax laws to obtain the economic equilibrium of a country. Kirchler [4] perceived a simpler definition in which tax compliance is defined as the most neutral term to describe taxpayers' willingness to pay their taxes willingly and honestly. Improved collection of taxes enables the Ethiopia government to provide fundamental services such as; education, medical services, improved infrastructure like roads and bridges, rural electrification, youth and women development funds, higher education loans board (HELB) funds and National budgetary expenditures to ensure Ethiopia sovereignty by avoiding overdependence on donor funding who may impose rigid conditions.

Tax evasion can be defined as the failure by a person or business to comply with the tax obligations. It is a serious challenge to tax authorities in both the developed and developing countries. However, this problem can be minimized through tax education [5];[6]. Tax evasion diminishes the mobilization of resources that governments need to invest in critical areas of social and personal development including health, education and infrastructure development [7]. Taxpayer education can be described as a method of educating the people about the whole process of taxation and why they should pay tax [8]. It assists taxpayers in meeting their tax obligations to the government. This means that the primary existence of taxpayer education is to encourage voluntary compliance amongst taxpayers. According to Misra [9], the main

objective of taxpayer education is in three folds: impart knowledge as regards tax laws and compliance; change taxpayer's attitude towards taxation and increase tax collection through voluntary compliance. With Ethiopia Revenue and Customs Authority (ERCA) as the main tax authority, Taxpayer Education Unit was formed in the year 2005. It was formerly known as Taxpayer Services under the Commissioner for Corporate Support Services. It then moved to the Marketing and Communication Division in 2008 as a section mandated with internal and external education. Its function is compiling and disseminating effective practices through advocacy programs to stakeholders and taxpayers.

In Ethiopia, taxpayers are categorized as small, medium or large depending on their business turnover or levels of income. Irrespective of one's category, taxpayers in Ethiopia, particularly Wolaita Sodo town are required to comply with VAT, TOT, Income Tax, Withholding Taxes and Customs duties in equal measure.

Some observed evidence on the ground shows that there will be hostilities between the taxpayers and tax collectors on issues relating to tax compliance. For example, tax evasion cases reported in Ethiopia local newspaper (Daily Nation, July 7, 2006, page 3) showed an outward resistance from taxpayers, for instance, the recent protest by taxpayers over the implementation of Electronic Tax Registers (ETR). Hostility towards tax compliance date back to the history of Taxation, "Taxes are considered a problem by everyone. Not surprising, taxation problems date back to the earliest recorded history" (Director, Tax world Organization, April 7, 1999). 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 [10]. Based on the review from the previous literature, there two different types of fairness: distributive and procedural fairness. Distributive fairness concerns considerations related to outcomes or the exchange of resources (how taxes are paid and spent). Procedural fairness relates to perceptions about the procedures, i.e. how the system works and how the dealings with the revenue bodywork (e.g. handling of different cases). Retributive fairness concerns the appropriateness of sanctions when rules or norms are violated. Perceptions of distributive

fairness have been shown to affect tax compliance [11];[4]. People who experience their tax burden to be higher than others tend to be less compliant with tax laws [9]. Likewise, the more people believe that the tax institution takes good care of their paid taxes and spends it carefully; the more compliant they tend to be. Studies suggest that procedural fairness influences the acceptance of decisions made by the tax authority and builds trust in the tax authority among private taxpayers [12].

1.2 Statements of the Problem

Tax compliance is growing global concerns for tax authorities and public policymakers as tax evasion seriously threatens the capacity of government to raise public revenue. Taxpayers will readily accept any new system introduced if they have ample knowledge to understand the system [13]. Thus, education programs organized by custom and duty authority or public education institutions are required to enhance taxpayers' ability to understand the importance of tax on country's economic development and to increase their confidence in fulfilling their responsibilities as taxpayers. Developing tax knowledge in taxpayers is an important element in operating a successful tax system. Achieving an appropriate voluntary compliance level could be achieved if taxpayers can complete the tax returns correctly and pay the right amount of taxes. Thus to realize the objectives of voluntary compliance, taxpayers need to be informed, well educated (particularly in tax matters), and their tax literacy level needs to be enhanced regularly to keep their knowledge up to date and relevant. However, less attention has been directed toward understanding precisely how education will influence tax payer's attitude towards tax compliance in Ethiopia. Hence, the influence of education on tax compliance must be investigated and the findings of this study can be used to inform sound public policymaking.

According to the article of science publishing group (2017), the factors affecting the tax compliance was Tax Complexity. And tax education is important for tax compliance and is also important for the tax authority to seriously look into the issues of tax knowledge and other compliance variables for effective tax compliance. Moreover, tax complexity has a positive relationship with tax knowledge and compliance behavior. By considering the above issues, the researcher was interested to investigate the influence of tax education on tax

compliance attitude of taxpayers by conducting an experiment on the taxpayer in Wolaita Sodo town. To address these following research questions were set.

- What is the factor that challenges taxpayers and tax authority regarding the determination of the amount of tax in Wolaita Sodo town?
- What is the impact of tax education on tax payer's complexity in Wolaita Sodo town?
- What can be recommended as a policy for the Ethiopian tax authority to maintain tax education gap between taxpayers and tax authority?

1.3 Objectives of the Study

The general objective of the study was to investigate the influence of tax education on tax compliance in Wolaita Sodo town.

Specific objectives of the study

This study has the following specific objectives:-

- To obtain an overview of the level of tax knowledge of taxpayers.
- To identify the impact of tax education on taxpayers compliance.
- To identify informed policymakers on the extent to which tax knowledge is important in voluntary compliance.
- To explore how the provision of tax education influences tax compliance attitude of taxpayers.

1.4 Significance of the Study

This study was designed to investigate the impact of tax education on taxpayers. The study also serves as an input for the government while formulating sound policies related to providing tax education as an instrument for reducing tax compliance of taxpayers. In addition to this study was serves as a guide for individuals who are interested in conducting further researches in these study areas.

1.5 Scope of the Study

The scope of this study, as its major objective is to evaluate the influence of tax education on tax compliance, is limited to second-year undergraduate Accounting students of Wolaita Sodo University and actual taxpayers in Wolaita Sodo city administration. 40 students will be used as participants in the experimental design and

160 real taxpayers as participants of the survey design in this study. The reason for selecting only 40 second-year undergraduate accounting students is that they don't take the taxation course in their formal study; the researcher assumes they don't have enough tax knowledge. Therefore, an education treatment will be provided for them and the results before and after treatment will be compared. The sample size may be small but based on the consideration of major factors such as finance and time; the researcher believes this sample size is enough.

1.6 Purpose of the Study

Previous studies suggested that procedural fairness of tax influences the acceptance of decisions made by the tax authority and builds trust in the tax authority among private taxpayers. Furthermore, studies recommended that a taxpayer should be given better tax knowledge to improve perceptions of fairness, tax ethics and attitudes to others' tax evasion and thus suggesting that a successful means of preventing tax evasion is to provide more tax knowledge to a larger segment of society in order to improve tax ethics and people's conception of the fairness of the tax system. The purpose of this study is to investigate the influence of tax education on tax compliance of taxpayers by conducting experimental research on the taxpayer in Wolaita Sodo Town. In addition to this, the level of tax knowledge of taxpayers and the relationship between tax education and tax knowledge will be examined. The study conducted by combining the experimental data with the survey data. The aim is at providing a statistical tool useful in improving the understanding of the tax liability dynamics by educating taxpayers. A statistical tool is essential for showing empirical evidence on the causes or factors associated with tax liability. The survey and experimental study explored factors and variation of tax liability among taxpayers. Computations were carried out using Statistical Package for Social Science (SPSS).

2. RESEARCH DESIGN AND METHODOLOGY

This chapter describes the research design involved in the study. There are two main sections in this chapter. The first one describes experimental design, which is the study's principal method of data collection, including the experimental procedures, sampling frame,

development of the questionnaire and hypotheses and data analysis techniques. The second part discusses the survey method of data collection with its sampling frame, survey instrument and data analysis techniques.

2.1 Research Approaches

According to Creswell [14], there are three approaches available for researchers to design their research methodology. These are quantitative, qualitative, and mixed methods research approaches. A quantitative approach is one in which the investigator primarily attempts to use post-positivist claims for developing knowledge like cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories. It employs strategies of inquiry such as experiments and surveys and collects data on predetermined instruments that yield statistical data.

Quantitative inquiries use numerical and statistical processes to answer specific questions. Statistics are used in a variety of ways to support inquiry or program assessment/evaluation. Descriptive statistics are numbers used to describe a group of items. Inferential statistics are computed from a sample drawn from a larger population to make generalizations from the sample about the whole population. The accuracy of inferences drawn from a sample is critically affected by the sampling procedures used. It is important to start planning the statistical analyses at the same time that planning for an inquiry begins. Decisions about analysis techniques to use and statistics to report are affected by levels of measurement of the variables in the study, the questions being addressed, and the type and level of information that you expect to include in reporting on your discoveries [15]. In quantitative research, you aim to determine the relationship between one thing (an independent variable) and another (a dependent or outcome variable) in a population. Quantitative research designs are either descriptive (subjects usually measured once) or experimental (subjects measured before and after treatment). A descriptive study establishes only associations between variables and an experiment establishes causality [16]. On the other hand, a qualitative approach is one in which the investigator often makes knowledge claims based primarily on constructivist perspectives like the multiple meanings of individual experiences, meanings socially and

historically constructed, with an intention of developing a theory or pattern, or advocacy/participatory perspectives like political, issue-oriented, collaborative, or change-oriented or both [14]. In this approach, the researcher collects open-ended, emerging data using strategies of inquiry such as narratives, phenomenology, ethnographies, grounded theory studies, or case studies.

Gall et al. [17], defined qualitative research as the inquiry that is grounded in the assumption that individuals construct social reality in the form of meanings and interpretations, and that these constructions tend to be transitory and situational. Qualitative research typically involves qualitative data, i.e., data obtained through methods such interviews, on-site observations, and focus groups that are in narrative rather than numerical form. Such data are analyzed by looking for themes and patterns. It involves reading, rereading, and exploring the data. How the data are gathered will greatly affect the ease of analysis and utility of findings [15]. Finally, a mixed approach is the newest research approach one, which bases the inquirer's knowledge claims on pragmatic perspectives that are consequence-oriented, problem-centred, and pluralistic [14]. It tries to mix the best of qualitative and quantitative research approaches into research studies. Either it uses strategies of inquiry simultaneously or sequentially that involves collecting quantitative and qualitative data to best understand research problems. The primary criterion that should be considered for selecting an approach is the research problem [14]. Given that, quantitative approach is best if the problem is identifying factors that influence an outcome, the utility of intervention, or understanding the best predictors of outcomes. This approach is also best to test a theory or explanation. Conversely, a qualitative approach is preferable 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.

2.2 Methods Adopted

As the objective of this study was to determine whether an individual's tax compliance attitude is influenced by education, by looking at the research problem this study will favour a quantitative approach. Therefore, the quantitative research approach was adopted in this study. Both experiment and survey methods of data

collection were used in this study. The following sub-sections describe the data collection methods, sampling and data analysis techniques used in both experiment and survey design.

2.2.1 Experimental design

This part discusses the experimental design that is the study's primary method of data collection. In this section, participants of the data collection, the procedures of the experiment, the data collection instruments and method of experimental data analysis are also described. The experimental design is a quantitative approach designed to ascertain the effects of treatment. The researcher introduced the treatment differently and observed the effects resulted from the treatment exposed. The experimental design is frequently utilized in both social sciences and scientific research. Although both approaches differ, both have the same aim that is to identify the cause for a particular behaviour. The experimental design is the blueprint of the procedures that enable the researcher to test hypotheses by reaching valid conclusions about relationships between independent and dependent variables. It refers to the conceptual framework within which the experiment is conducted. Experimental studies are also referred to as interventions because you do more than just observe the subjects. Experimental design is the process of planning a study to meet specified objectives. Planning an experiment properly is very important to ensure that the right type of data and sufficient sample size and power are available to answer the research questions of interest as clearly and efficiently as possible. An experiment is a process or study that results in the collection of data. The results of the experiments are not known in advance. Usually, statistical experiments are conducted in situations in which researchers can manipulate the conditions of the experiment and can control the factors that are irrelevant to the research objectives [16]. There are two different approaches to conducting experimental research. They are between-subjects design and within-subjects design.

In the within-subjects design, all samples are exposed to the same treatment; while in the between-subjects design, samples are randomly exposed to different treatment. This study utilized a within-subjects design. Following these discussions, the experimental method of data collection, sampling design and the experimental procedures of the study are presented as follows.

Experimental data collection: Primary data were collected through questionnaires. The questionnaires were divided into 3 sections to extract information to test the hypotheses. The first section comprised questions about the samples' demographic information. The second section contained questions related to tax knowledge. The third section consisted of questions regarding tax compliance. Experimental Data is collected twice. The first collection is conducted at the beginning before the taxpayers attend the taxation course. The second collection is conducted when the taxpayer completed their taxation course offered by the researcher. The tax course they took is the treatment exposed to all selected samples. The advantages of using questionnaires as listed by Ahmad (1997), as cited in Mohamad et al. [18] are as follows:

1. Each sample is given the same questions in the same sequence thus allowing the researcher to compare one respondent to another or one group of respondents to another.
2. Standardized questionnaires expedite data gathering process and ensure the quality of data gathered.
3. Allows easy data processing.

Experimental sampling: The basic idea of sampling is that by selecting some of the elements in the population we may conclude the entire population. There are several compelling reasons for sampling, including lower costs, greater accuracy of results, and greater speed of data collection, and availability of population elements [19]. In studying the influence of education on tax compliance attitude, it is more suited to use students as samples [18]. In this study, the taxpayers were used as the target population. Thus, 40 volunteer taxpayers are used as samples of the experiment design.

Experimental procedure: The experiment was conducted for seven days in Wolaita Sodo town. At the beginning of the experiment, a set of questionnaires will be distributed to 160 taxpayers. After that, a formal lecture was given for these 40 taxpayers by the researcher itself on taxation course and Ethiopian tax rules, for accounting 4 hours per day for a total of seven days. Because these taxpayers didn't take the formal taxation course previously, the researcher believes that the provision of the lecture will help the taxpayers to acquire a detailed understanding of the Ethiopian tax accounting

principle. Therefore, upon the completion of the experiment, to check the influence of the education on the respondents' tax compliance attitude, the same set of questionnaires with one additional question will be distributed to the 40 sets of sample taxpayers. The additional question posed the following state of affairs to the respondents.

2.2.2. Survey design

In this section, the survey data collection, survey sampling and methods of survey data analysis are described. The basic idea behind survey design is to measure variables by asking people questions and then to examine relationships among the variables. In most instances, surveys attempt to capture attitude or patterns of past behavior. The most commonly seen survey uses the cross-sectional design, which asks questions of people at one point in time [20]. The reason why survey method of data collection used is that: because the real taxpayers have experience of paying tax and it is reasonable to make a generalization based on the results obtained from these respondents concerning the level of tax knowledge effects to tax compliance.

Survey sampling design: Sample processes of selecting some element from the entire population. The target population for the survey study was actual taxpayers who are subject for business income tax. Only unincorporated business taxpayers in Wolaiata Sodo Town are used as participants in the survey study. The target total population is 11,278 business income taxpayers as of July 2017 which is categorized under A, B, and C. Only 160 taxpayers were selected by using systematic random sampling from Wolaita Sodo town.

Survey data collection: The survey data was collected through self-administered questionnaires. The cross-sectional design was used in this study. In the survey, questionnaires are divided into three sections. The first section (section A) deals with the demographic information of the respondents. The second section (section B) comprised of questions related to tax knowledge and the last section (section C) consisted of questions concerning tax compliance attitude. There are a total of 38 questions asked the respondents which are divided into the above three sections. Section A consists of 4 questions, section B 25 questions and section C has 9 questions. The survey

questionnaires are developed to extract information about the level of tax knowledge of actual taxpayers and their attitude towards tax compliance. The survey was conducted for around one month from February 10, 2018, to March 10, 2018.

Survey data analysis techniques: The collected data analyzed by using descriptive techniques such as frequencies, mean score and proportions. The survey data results and analysis section is divided into three parts. Part one presents the background information of the respondents involved in the study. The second part describes the tax knowledge level of actual taxpayers. The last part explains the tax compliance attitude of taxpayers who are involved in the survey study. Finally, the results are presented in tables and figures.

3. RESULTS AND DISCUSSION

The objective of this study was to examine the influence of tax education on tax compliance. To achieve this objective both experiment and survey methods of quantitative data collection are used. This study tests two hypotheses. The first hypothesis is related to tax knowledge i.e. whether tax knowledge of taxpayers is improved because of the tax education. The second one is regarding tax education i.e. whether tax education positively influences the compliance attitude of the taxpayer. The next section presents the research results about tax compliance and the accompanied determinant factors for the existence of tax compliance with existing data.

3.1 Backgrounds of Respondents

As in Table 1 indicated, out of the 158 respondents, 72 (45%) respondents are male and 85(53%) are female remaining 2 respondents are in non-response rate. Out of respondents 158 answered for their education status 39(24%) of respondents are non educated, 35(22%) are educated primary school, 25(15.6%) of respondents attended secondary school, 39(24.4) respondents have diploma certificate and remaining 20(12.4e%) respondents have BA/Bsc degree and above. When we look at ages of taxpayers in the study area 62(37.6%), 55(33.3%), 32(19.4%), 11(6.7%) of respondents are aged 21-30,31-35,36-50, and above 50 respectively.

Table 1. Background of respondents

Variables under study		Frequency	Percent
Gender	Male	72	45.0
	Female	85	53.1
	Total	157	98.1
Level of education	Non educated	39	24.4
	Primary school	35	21.9
	Secondary school	25	15.6
	Cirtificate/diploma	39	24.4
	Ba/bsc degree	14	8.8
	Post graduate and above	6	3.8
	Total	158	98.8
Age categories	21-30	62	37.6
	31-35	55	33.3
	36-50	32	19.4
	ABOVE 50	11	6.7
	Total	156	97.0

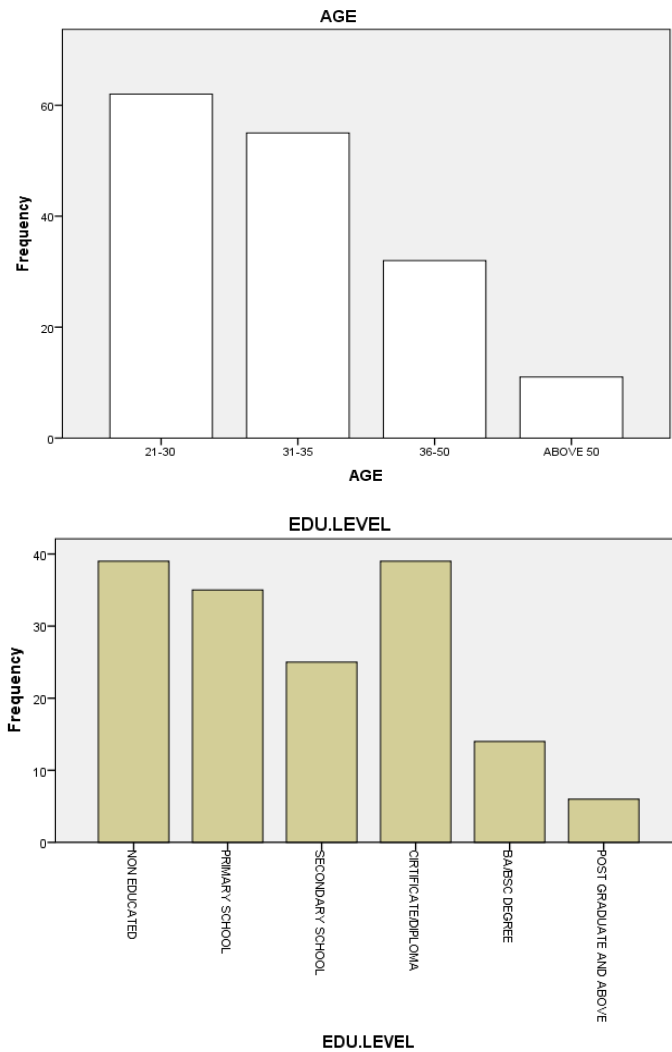


Fig. 1. Simple Bar chart of Some Demographic Level of Respondent

Table 2. Cross tabulation of tax comply and education level of respondent

		Tax. Comply		Total
		Yes	No	
Education Level	Non Educated	2	37	39
	Primary School	9	26	35
	Secondary School	16	9	25
	Certificate /Diploma	37	2	39
	BA/BSc Degree	9	5	14
	Post Graduate And Above	6	0	6
Total		79	79	158

Chi-Square Tests of Association

	Value	df	P-value
Pearson Chi-Square	80.18	5	.00
Likelihood Ratio	96.65	5	.00

Table 3. Cross tabulation of tax comply and sufficiency of information given by tax revenue

			Tac.comply * info.revenue cross tabulation					Total
			Info.Revenue					
			Strongly Agree	Agree	Undecided	Disagree	Strogly Disagree	
Tac.comply	yes	Observed	34	20	6	7	12	79
		Expected	19.5	11.5	6.0	20.5	21.5	79.0
	no	Observed	5	3	6	34	31	79
		Expected	19.5	11.5	6.0	20.5	21.5	79.0
Total		Observed	39	23	12	41	43	158
		Expected	39.0	23.0	12.0	41.0	43.0	158.0

Chi-Square Tests of association Between Tax Comply and Sufficiency of Information Given by Tax Revenue

	Value	Df	P-value
Pearson Chi-Square	60.305 ^a	4	.000
Likelihood Ratio	66.320	4	.000

Table 4. Knowledge of Taxpayer Concerning Types of Taxable Income types

Variable under study	categories	Frequency	Percent
Basic salary is taxable	not sure	2	1.2
	Correct	155	96.9
	Wrong	0	0
	Total	157	98.1
Commission is taxable income	not sure	65	40.625
	Correct	18	11.25
	Wrong	49	30.625
	Total	132	82.5
Hardship allowance is taxable income	not sure	75	46.625
	Correct	23	15.25
	Wrong	58	36.25
	Total	157	98.125
Over time earning is taxable income	not sure	73	45.625
	Correct	26	16.25
	Wrong	58	36.25
	Total	157	98.125

The Crosstabs procedure forms two-way and multiway tables and provides a variety of tests and measures of association for two-way tables. As indicated from the table, p-value (0.000) for Chi-Square Tests of association between tax comply and level of education shows two variables are highly associated. This result is in line with previous studies by Lewis [21], who concluded low tax knowledge correlates with negatives attitude toward taxation. And similar with findings of [22], who stated tax attitudes can be improved through better tax knowledge, and thus this will, in turn, increase compliance and reduce the inclination to evade taxes.

The Crosstabs procedure forms two-way and multiway tables and provides a variety of tests and measures of association for two-way tables. As indicated from the table, p-value (0.000) for Chi-Square Tests of association between tax comply and sufficiency of information given by tax revenue shows two variables are highly associated.

Questions regarding employment income, business income, turn over tax, and excise and value-added taxes are asked in this part. To check the tax knowledge level of taxpayers who didn't take the formal taxation course, some questions about incomes/items included/excluded in/from employment taxable income and categories of taxpayers were asked. In this part, a total of 7 questions are asked which are divided into subsections namely knowledge about employment income and business income. In the employment income section, four types of income are listed and asked the respondents whether they have to be included or excluded in/from taxable income. The first one is basic salary i.e. basic salary is included in taxable income. Respondents then gave their answer whether the statement is correct or wrong from the available five choices. Therefore, as we can see from Table 4, almost all respondents i.e.155 (96.9.1%) states the statement is correct and only one 2(1.2%) respondent chooses the statement is not correct. It is known that the basic salary is a taxable income. The second question is about the commission that is whether the commission must be included in taxable income or not.

As indicated in Table 4, greater than half of the respondents i.e. 71.2% (105), states that commission must not be included in the taxable income/or they are not sure about it and the remaining 18 (11.25%) respondents say that

commission must be included in the determination of the taxable income. This shows that the majority of the respondents do not know the inclusion of commission to the amount which is required to calculate the actual tax to be paid. The commission is remuneration to an employee for his/her additional activity required by the employee. The commission is a taxable income, therefore, we have to add to other taxable incomes to determine the total taxable income of an employee.

The third income listed is overtime earning, and around 58(36.25%) of the respondents say that overtime earning must not be included in the taxable income, 73(45.5%) of the total respondents chooses not sure whether overtime earning must be included in the taxable income and only 26(16.25%) of respondents state that overtime earning must be included in income which is subject to tax. Overtime earning is the amount of money payable to an employee for overtime work performed during a specific payroll period. Therefore, this amount must be included in taxable income, but the majority of the respondents didn't know that this amount is included in the amount of income which is considered as taxable income. These show that the knowledge of respondents about this is insubstantial.

The last item listed in the employment income subsection is hardship allowances. That is, respondents are asked whether this item must be excluded or not. So, as you can see from table 75(46.5%) of the total respondents chooses not sure whether hardship allowance must be included in the taxable income, and 23 (15.2%) of the respondents chooses that hardship allowance must be included in the taxable income. And only remaining 58(36.25%) of the respondents were answered correctly about excluding or including of hardship allowance. Hardship allowance is a sum of money given to an employee to compensate for inconvenient circumstances caused by the employer. Hardship allowance is one of the fully exempted allowances. Therefore, this allowance must not be included in taxable income. But, majority of the respondents answers that this allowance must be included in taxable income or not sure about it.

Finally, 96.9 respondents state that basic salary must be included in taxable income. Respondents answered that basic salary is a taxable income, but 73 (45.62%) respondent's

state that hardship allowance must be included in the taxable income, Only 18 (11.25%) of the respondents says that commission is an income that must be included in taxable. 58(36.25%) of the respondents says that overtime earning must not be included in the taxable income.

3.2 Experimental Data and Results

3.2.1 Descriptive statistics for experimental data

Respondents are also asked to state whether the direct cost of producing the income, such as the direct cost of manufacturing, purchasing and selling costs shall be deductible from gross income in calculating taxable business income. 47(28.5%) respondents agree with the deduction of the direct cost of manufacturing from gross income in calculating taxable business income. 53.3% (88) respondents didn't agree with the deduction of this cost from gross income and the rest 17 (10.5%) respondents are not sure about this deduction. The direct cost of producing the income is an expense incurred to earn the income, therefore this amount must be deducted from the earned income to determine the taxable income. Thus, majority of the respondents agree with this deduction. As indicated in Table 5, 73 (44.2%) respondent's states that commissions paid for services rendered to the business shall not be deducted from the amount of gross profit while determining taxable business income whereas 26 (21.1%) respondents state this amount must be deducted. The rest respondents are not sure about the deduction. The commission paid for services rendered to the business is one of the amounts that can be deducted to calculate taxable business income. But as the result shows that majority of the respondents do not know about deducting this amount from the gross profit. Respondents are also asked to state whether general expenses connected with the personal activity of the business owner shall be deducted from gross income to determine taxable business income. As a result, 88 (71.5%) respondents didn't agree with the deduction, 8(6.5%) respondents are not sure about the deduction and the remaining 27(22%) respondents agree with the deduction of this amount from the gross profit to calculate taxable income. General expenses incurred in connection with the personal activity of the business owner must not be deducted from the gross profit to determine the taxable income of a business. This is based on the business entity concept that states activities of the business

must be separately recorded from the activities of the business owner. As a result, 97 almost 71.5 % of the respondents understood this concept and that is why they agree with the deduction of these expenses from gross profit. From the total respondents, 94.3% correctly states that turn over tax is payable on goods sold and services rendered by persons not registered for VAT and the rate is 2% on goods sold locally and 2% on contractors, grain mills, tractors & combine harvesters & 10% on other services rendered locally and 5 (4.1%) respondents are not sure about this type of tax. Only 2 (1.6%) respondents stated that this is the wrong statement.

3.2.2 Inferential statistics for experimental data

Before and after experiment respondents are asked to check whether they know basic taxation rules. And their marks answered for the following 7 questions are converted to out of 50 marks.

1. Basic salary, commission, hardship allowance, overtime earning are taxable income
2. The direct cost of producing the income, such as the direct cost of manufacturing, purchasing and selling costs is one of the deductible expenses from gross income in calculating taxable business income
3. Commissions paid for services rendered to the business costs is one of the deductible expenses from gross income in calculating taxable business income.
4. The direct cost of producing the income, such as the direct cost of manufacturing, purchasing and selling costs is one of the deductible expenses from gross income in calculating taxable business income.
5. A commission paid for services rendered to the business costs is one of the deductible expenses from gross income in calculating taxable business income.
6. The general expense connected with the personal activity of the business owner costs is one of the deductible expenses from gross income in calculating taxable business income.

After the respondents of the experiment design are exposed to the treatment i.e. tax education, there is better knowledge regarding the general responsibilities and rights of taxpayers. This indicates that it is possible to improve the tax knowledge of taxpayers by letting them attend

Table 5. Knowledge of Taxpayer Concerning Types of Deductible Types of Expenses

	Categories	Frequency	Percent
General expense connected with the personal activity of the business owner costs is one of deductible expenses from gross income in calculating taxable business income.	Wrong	75	45.5
	Not Sure	16	9.7
	Correct	67	40.6
	Total	158	95.8
The direct cost of producing the income, such as the direct cost of manufacturing, purchasing and selling costs is one of deductible expenses from gross income in calculating taxable business income.	Wrong	88	53.3
	Not Sure	17	10.3
	Correct	47	28.5
	Total	152	92.1
persons can be registered for VAT iff his/her annual sells capital is above 1 million	Wrong	81	49.1
	Not Sure	12	7.3
	Correct	62	37.6
	Total	156	94.4
Turn over tax is payable on goods sold and services rendered by persons not registered for VAT	Wrong	63	38.2
	Not Sure	9	5.5
	Correct	79	47.9
	Total	152	92.2
Commissions paid for services rendered to the business costs is one of deductible expenses from gross income in calculating taxable business income.	Wrong	73	44.2
	Not Sure	19	11.5
	Correct	59	35.8
	Total	151	91.5

Table 6. Paired samples statistics of scores of tax payers before and after training

	Mean	N	Std. Deviation	Std. Error Mean
After Training	23.26	39	8.296	1.328
Before Training	14.62	39	5.646	.904

Mean diff	Paired Differences					T	P-value
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		
After Trai – beforeTrain	8.641	5.537	.887	6.846	10.436	9.746	.000

some tax education. It is also indicated that the respondent's knowledge about types of income and the level of awareness on offences and penalties was better after-tax education is provided to the respondents than before they are exposed to the treatment. Thus, by educating and keeping taxpayers well informed, their knowledge can be positively influenced. Therefore, as the taxpayers are becoming well informed of their responsibilities and rights as well as the penalties they will bear if they commit some offences, they may have positive tax compliance attitude. According to Kasipillai et al. [13], 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.

The survey result of Demissie [23], reveals that tax payer's poor knowledge of tax rules and regulations is the most deterring factor of voluntary compliance. Therefore, improving taxpayer's knowledge about tax rules and regulations is important to have better voluntary compliance by the taxpayers. Eriksen and Fallan [22] claimed that 'knowledge about tax law is assumed to be important for preferences and attitudes towards taxation. Thus, to improve the tax knowledge it is important to educate taxpayers about the tax rules and tax regulation. Author of this paper stated that educating taxpayers and keeping them well informed with the sentences of being an evader may be important, as a prevention measure is better. Based on results obtained for paired sample T-test mean value of taxpayer for experimental

data described above is consistent with Mohamed et al. [18] stated.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The primary objective of this study is to examine whether tax education influences the tax compliance attitude of taxpayers. To achieve this objective, the study used a quantitative research approach. Among the methods of quantitative approach, experiment and survey methods of data collection were adopted. From the two approaches of experimental research, with subjects design is employed in this study. Based on the results obtained, the following conclusions are made:

Greater parts of respondents before attending the tax course were unaware of the responsibilities and rights as taxpayers, they had weak knowledge about the types of income included and excluded in/ from taxable income and categorization of taxpayers, and they were not also well informed of the different offences and their penalties and compounds. Therefore, the experiment respondents had very weak knowledge about tax before the treatment is provided to them.

The tax compliance attitude of those respondents who didn't attend the tax course is negative. The majority of such respondents show their attitude not to comply with the tax laws because of lack of awareness on the importance of paying the right amount of tax on countries development and the penalties that can be imposed for not complying with the tax laws of the country. Hence, tax non-compliance attitude is associated with lack of tax knowledge. This finding is consistent with what Bătrâncea Larissa-Margareta, et al. 2012) [24] conclusion by conducting research on tax compliance relation to taxpayer behavior and concluded that tax compliance is related not only to economic but also to behavioral issues that impact the process of raising public levies.

Table 6 indicated that the majority of respondents before attending the tax course had weak general tax knowledge. But, because of attending the tax course, majority of the respondents showed improvement in their general knowledge about tax. Experimental data results in Table 6 indicated that the respondents

improved their tax knowledge after the provision of tax course, and therefore, author of this paper concludes that tax literacy is one of the key elements shaping tax compliance. Thus, providing tax course or tax awareness programs or workshops for actual taxpayers can improve their general tax knowledge. This result was consistent with [25] conclusion by surveying 358 Romanian taxpayers and observed how tax literacy influences tax compliance.

Majority of the respondents after attending the tax course scored high value regarding the tax knowledge. There is a great difference between the tax compliance attitude of these respondents before and after attending the tax course. Before attending the tax course, majority of respondents showed the plan of not complying with tax laws. But after attending the tax course, the largest part of the respondents proves the identification of taxable and non-taxable income types. As it is explained in the above paragraph, the tax knowledge of respondents is improved after attending the tax course. The tax compliance attitude of the majority of respondents is also improved after the provision of a tax course. Therefore, it can be concluded that the tax compliance attitude of taxpayers can be improved by enhancing their tax knowledge and one of the mechanisms to enhance knowledge is providing tax education to the targeted group. Providing tax education can take different forms.

4.2 Recommendations

The following possible recommendations can be used by policymakers in order to make a sound policy in relation to providing tax education as a means of reducing taxpayers' non compliance attitude: If tax non compliance attitude is improved because of the provision of tax education, the ministry of education has to think this relationship and try to include the public finance and taxation course in the curriculum of all departments. This is because, tax is one of the major sources of revenue for a government which is used in general to finance public expenditures and if tax education influences tax compliance attitude of taxpayers, the tax course (similar to civics and ethics) must be provided as a common course for all students. The course public finance and taxation is provided only for business students in Ethiopian universities. As students of other departments will be also taxpayers after completion of their study, the public finance and taxation course must be included in all these departments. Therefore, the

ministry of education should have to give attention to this positive relationship between tax education and tax compliance.

Because there is a positive relationship between tax education and tax compliance attitude, the Ethiopian tax authority must frequently provide tax awareness programs for taxpayers to reduce their tax non-compliance attitude. This recommendation is similar to Anca Nichita et al. [25]; Ayee [26] stated individuals will continue to willingly pay their taxes if they know that their taxes are being put to good use. It is therefore recommended that the government through the ministry of information should continuously educate the taxpaying public about ongoing projects which are being financed from their taxes. When taxpayers get feedback from their governments in connection with the use to which their taxes are put, their voluntary compliance levels may increase as a result.

This positive relationship could be considered as a key input for the authority in:

- Giving feedbacks use of tax to taxpayer from government
- Increasing taxpayers' awareness regarding a tax matter.
- Designing the best mechanism of delivering the latest information on tax regulations (i.e. advertisements in media, websites, brochures and customer services desks), and
- Communicating effectively and efficiently current changes in tax.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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