Impact of Tax Audit on Tax Compliance with Reference to Category “A” Taxpayers: A Case Study in Hawassa City Administration, South Nations, Nationalities and Peoples’ Regional State of Ethiopia

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The main issue faced by all tax authorities is that it has never been easy to persuade all taxpayers to comply with the regulations of a tax system. Business sector is one of the fastest growing sectors of the economy in Ethiopia. The study specifically sought the effect of tax audit, fines and penalties, and tax education and knowledge on tax compliance in Hawassa City, south nations, nationalities and peoples’ regional state. Population under this research comprises Hawassa City audit officers who are 50 audit officers. Since the number of staff is not large, the study used census approach. Data were collected using structured questionnaire, both primary and secondary data were used. Descriptive statistical tools and correlation and multiple regressions analysis were used in analyzing the data collected. The study findings showed that probability of tax audit, and tax knowledge and education have positive effect on level of tax compliance. Similarly, fines/penalties have positive effect on level of tax compliances. The study provides some preliminary evidence that probability of tax audit, imposing fines/penalties and provision of tax knowledge and education will improve tax compliance. There should be stiff enforcement of fines and penalties to deter tax evasion. Additionally, tax authorities should simplify processes involved in filling of returns and payment of taxes.

Keywords: tax audit, tax compliance, tax education, knowledge, taxpayers

Introduction

All over the world, governments undertake huge public expenditure on behalf of their citizens for the provision of basic amenities and other social services. To meet up with these responsibilities, governments thus require substantial amount of funds. Among the various sources from which governments can generate income, taxes are the most important and most reliable, contributing much more than any other source. A tax, therefore, is a compulsory levy imposed by the government on the income, profit, or wealth of an individual, family, community, corporate or unincorporated bodies, etc. for purposes of financing public expenditures. Taxation is the inherent power of the state, exercised through the legislature, to impose financial burdens upon subjects within its jurisdiction for the purpose of raising revenues to carry out the legitimate duties of government. One

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major problem inhibiting effective tax administration in emerging economies is tax evasion, i.e., deliberate refusal to pay tax. To combat this ugly phenomenon, various countries of the world have introduced tax audit into their tax system.

According to Kircher (2008), tax audit is the examination of an individual or organization’s tax report by the relevant tax authorities in order to ascertain compliance with applicable tax laws and regulations of state. He further reported that tax audit is a process where the internal revenue service tries to confirm the numbers that you have put on your tax return. Ola (2001) stated that the process of tax audit involves tax returns that are selected for audit using some selection criteria. Thereafter, the underlying books and records of the taxpayers are examined critically to relate them to the tax return filed. Tax audit is important because it assists the government in collecting appropriate tax revenue necessary for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the taxpayers, to organize the degree of tax avoidance and tax evasion, to ensure strict compliance with tax laws by tax payers, to improve the degree of voluntary compliance by tax payers, and to ensure that the amount due is collected and remitted to government.

Taxation in developing countries is a challenging topic and has attracted increasing attention to the researchers. Many problems observed like poor tax administration, failing to collect sufficient tax revenues. In many developing countries, it is observed that there is low capacity of tax administration to monitor compliance among taxpayers and the potential amount of tax revenue has not been collected in an efficient and equitable manner (Kircher, 2008).

Therefore, it is very important to study factors that affect tax compliance of the country in order to increase government revenue and assure economic stability. In a country, like Ethiopia, where the contribution of revenue to the overall economic development is believed to be very much significant, more local studies on the assessment of taxpayers voluntary compliance with tax law is required so as to provide the policy-makers and the implementers in the area with relevant information that can help them in designing the appropriate tax system. The main objective of this study is to examine the impact of tax audit on tax compliance in Ethiopia with reference to Hawassa City administration.

**Review of Literature**

**Theoretical Framework**

A tax audit is an examination of whether a taxpayer has correctly reported its tax liability and fulfilled other obligations. It is often more detailed and extensive than other types of examination, such as general desk checks, compliance visits, or document matching programs (Organisation for Economic Co-operation and Development [OECD], 2006). Most taxpayers report their tax liabilities more accurately if they believe that the tax administration has the capacity to detect any unreported liabilities and that heavy penalty may be applied when they are detected.

There are different types of tax audit which are implemented in different countries. Biber (2010) noted that there are different tax audit program. These are desk audit or verification, field audit, registration check, advisory audit, record keeping audit, refund audit, issue-oriented audit, comprehensive or full audit, and fraud investigation.

The exact meaning of tax compliance has been defined in various ways. For example, Kirchler (2008) perceived a simpler definition in which tax compliance is defined as the most neutral term to describe taxpayers’ willingness to pay their taxes. A wider definition of tax compliance, defined in 1978 by Song and Yarbrough
suggested that due to the remarkable aspect of the operation of the tax system in the United States and that it is largely based on self-assessment and voluntary compliance, tax compliance should be defined as taxpayers’ ability and willingness to comply with tax laws which are determined by ethics, legal environment and other situational factors at a particular time and place.

Jackson and Jones (1985) listed 14 main factors that have influenced tax compliance as discussed by various researchers. These factors are age, gender, education, income, occupation or status, peers’ or other taxpayers’ influence, ethics, legal sanction, complexity, relationship with taxation authority, income sources, perceived fairness of the tax system, possibility of being audited, and tax rate. Various researchers have listed factors that influenced tax compliance, such as demographic, income, compliance cost, and tax agents (Mohani, 2001), in addition to moral or ethical factors (Singh, 2003; Kasipillai, Norhani, & Noor Afza, 2003).

Empirical Reviews

There are several theoretical and empirical studies on tax audit and tax compliance. These studies provide mixed reactions on the relationship between tax audit and tax compliance. Alm James and McKee (2006) investigated the application of experimental methods to examine the individual compliance responses to a “certain” probability of audit, and conclude that the compliance rate rises if an individual knows he will be audited and the rate falls if he knows he will not be audited. Slemrod, Blumenthal, and Christian (2001) examined randomly selected taxpayers and inform them that their filling will be “closely examined” and found evidence of taxpayers’ behavior changes in response to an increased probability of audit, although the responses are not uniform among different groups of taxpayers. Mittone & Luigi (2006) investigated that early experience of audits in taxpayers’ “tax life” is a more effective way to increase compliance than later audits.

Allingham Michael and Sandmo (1972) claimed that taxpayers will always declare their income correctly if the probability of detection is high. Probability of detection plays a significant role in reporting behavior as taxpayers will declare everything if they perceive that they will be one of the auditees in that particular year. Slemrod, Blumenthal, and Christian (2001) investigated the relationship between the probability of being audited and the taxpayers’ responses. The experiment indicated that taxpayers’ behavior varied with respect to level of income and the probability of being audited played a significant role in determining taxpayers’ evasion behavior. However, the direction of the relationship (positive or negative) was not clearly stated by Slemrod et al. (2001). Conversely, Slemrod et al. (2001) observed that probability of being audited again was negatively correlated with compliance behavior.

According to Palil and Mustapha (2011), a theoretical economic model has clearly indicated that penalties as well as audit probability have an impact on tax compliance. The higher the penalty and the potential audit probability, the greater the discouragement for potential tax evasion. They suggested that to overcome the endogeneity is necessary to control the enforcement environment artificially by using laboratory experiment methods.

Butler (1993), as cited in Palil and Mustapha (2011), also found that tax audits can change compliance behavior from negative to positive. These findings complement the Witte and Woodbury (1985) and the Beron, Tauchen, and Witte (1987) studies. Witte and Woodbury (1985) in their study of small proprietors found that tax audits have a significant role in tax compliance. They did not empirically test individual taxpayers, thus left open room to conduct research in this area. While Witte and Woodbury (1985) found significant results, Beron et al. (1988) found a contradictory result. They reported that audits did not significantly correlate with evasion
for all groups they studied. Audits were found to be more effective in inducing taxpayers to over claim deductions rather than encouraging them to correctly report actual income (Beron et al., 1988).

From the foregoing, it is observed that previous studies have evidenced that tax audits play an important role in increasing voluntary compliance. Audits rates and the thoroughness of the audits could potentially encourage taxpayers to be more prudent in completing their tax returns.

**Research Design and Methodology**

**Research Design and Approach**

A case study was conducted at Hawassa City Category “A” taxpayers. Therefore, this study used descriptive research to examine the effect of tax audit on tax compliance with reference to Category “A” taxpayers. For this research, to utilize the strengths and overcome the weaknesses of qualitative and quantitative approaches, a mixed research method was employed.

**Study Population**

The study population includes all Ministry of Revenue, Hawassa Branch Audit division staffs or tax auditors including tax officers. Population under this research comprises Hawassa City administration tax audit officers who are 50 audit officers. Since the number of staff is not large, the study used census approach. The researcher administered 50 questionnaires out of which 47 questionnaire were completed and returned.

**Sources and Instruments of Data Collection**

A structured questionnaire was administered to the population group. Due to the fact that knowledge and perception of tax officers is related to group dynamics, interaction, group values and norms as well as internal and external factors that positively or negatively affect their performance on tax compliance. On the other hand, in order to understand the views, trends, and challenges of the management, a semi-structured key informant interview was conducted with officials of the bureau. Tape recorder was used during the key informant interview to capture all discussions with prior knowledge of discussion participants and the respective interviewee. In addition, secondary data from journals, literatures as well as official reports of tax office was used during analysis.

In addition to the structured questionnaire, semi-structured key informant interview was also held with selected officials in Hawassa City revenue office. Key informant interview is used because of its flexibility. Moreover, it allowed depth to be achieved by providing the opportunity on the part of the interviewer to probe and expand interviewee’s responses. This atmosphere enabled the researcher to clarify points and raise fresh questions so as to gain a deeper understanding. (Patton, 2002).

**Methods of Data Analysis**

Data analysis was done by SPSS version 20. Dependent variable which in this case is tax compliance was analyzed against independent variables, such as tax knowledge, probability of being audited, and tax penalties. Quantitative data findings were triangulated with the qualitative data findings and secondary data findings. Questionnaires received from respondents and interview schedules were checked for completeness with repeat calls being made for incomplete questionnaires to maintain the number of respondents. Categorization and coding was then done and data entered into SPSS for windows version 20 for analysis. Spearman correlation and multiple regressions analysis were also conducted. Finally, the results from SPSS Software were expressed using various descriptive statistical techniques, like frequencies, percentages, means, etc.; and presented using
Description of Study Variables and Model Specification

Variable Measurement

In this study, tax compliance was measured using three hypothetical questions. It is based on Palil (2010) and Troutman (1993) with some modification to suit our country’s context. The use of hypothetical questions can increase reliability of results and minimize 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 “Strongly disagree” to “Strongly agree”, using a likert scale of 1 to 5, respectively. The items that made up the scale include: (1) probability of being audited; (2) tax penalties; and (3) tax knowledge.

Model Specifications

Analysis was done using Spearman correlation and multiple linear regression models. According to Coakes and Steed (2007), multiple regressions are an extension of bivariate correlation. They stated that the result of regression is an equation that represents the best prediction of a dependent variable from several independent variables. Regression analysis is used when independent variables are correlated with one another and with the dependent variable. The regression model used to test is shown below:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \Sigma \]

Where \( Y \) = tax compliance; \( \alpha \) = constant; \( \beta_1, \beta_2, \) and \( \beta_3 \) = coefficients of independent variables; \( X_1 \) = probability of tax audit, \( X_2 \) = tax fines and penalties, and \( X_3 \) = tax knowledge and education; \( \Sigma \) = error term.

All the above statistical tests were analyzed using the Statistical Package for Social Sciences (SPSS), version 20. All tests were two-tailed. Significant levels were measured at 95% confidence level with significant differences recorded at \( p < 0.05 \).

Analysis and Results

Demographic Information

Demographic information shows the characteristics of the elements in the sample size: As such the researcher sought to establish the general information of the respondents, which forms the basis under which the interpretations are made. Demographic Factor 1 analyzed the gender of the respondents. This information was necessary to enable the researcher to obtain information on whether the respondents were either male or female. Accordingly, 31 (66%) of the respondents were male whereas 16 (44%) of them were female. Demographic Factor 2 shows the age groups of respondents, 27 (57.4%) of the respondents were below 30 years of age, whereas 20 (42.6%) of them were between 31 and 40 years of age. This result illustrates that most of the tax auditors in Hawassa City administration were generally young (below 30 years of age).

Socio-economic Status of Respondents (Tax Auditors)

Educational levels, field of study and work experience of the tax auditors in general are the most important variables that can affect the performance of tax audit as well as tax administration system. In line with these attempts have the educational level of the respondents, field of study and work experience been made to assess. Generally, the respondent’s socio-economic status is presented in Table 2.

With regard to field of study, majority of the respondents were specializing in Accounting and Finance.
which accounts for 87.2% of the total respondents. The remaining 10.7% and 2.1% of the respondents were specializing in Business Management and Economics respectively. As indicated in Table 2, 17% of the respondent (tax auditors) have service year of less than two years, 44.7% of the respondents have service years of two to four years and 38.3% of the respondents have service years of four to six years. This shows that above 83% of Hawassa City Revenue Authority’s tax auditors have more than two years of work experience, as tax auditor. As it is discussed in the above paragraphs, the majority of the respondents have a good level of educational qualification that is BA or B.Sc. degree and M.Sc. Degree which enables the respondents to have idea of the tax audit. Moreover, majority of the respondents studied the field related to business which enables them to understand the implementation of taxes and related issues.

Table 1

| Demographic variables | Frequency | Percent (%) |
|-----------------------|-----------|-------------|
| Gender                |           |             |
| Male                  | 31        | 66          |
| Female                | 16        | 34          |
| Total                 | 47        | 100         |
| Age group             |           |             |
| Less than 30 years old| 27        | 57.4        |
| 31-40 years old       | 20        | 42.6        |
| Above 50 years old    | 0         | 0           |
| Total                 | 47        | 100         |

Note: Source: SPSS Output from survey data, 2019.

Table 2

| S.N. | Item                     | Frequency | Percentage (%) |
|------|--------------------------|-----------|----------------|
| 1    | Educational background   |           |                |
|      | BA/B.Sc.                 | 40        | 85.11          |
|      | MA/M.Sc.                 | 7         | 14.89          |
|      | Accounting & Finance     | 41        | 87.2           |
| 2    | Field of study           |           |                |
|      | Economics                | 1         | 2.1            |
|      | Management               | 5         | 10.7           |
|      | Less than two years      | 8         | 17             |
| 3    | Work experience as auditor|         |                |
|      | Two to four years        | 21        | 44.7           |
|      | Four to six years        | 18        | 38.3           |

Note. Source: SPSS Output from survey data, 2019.

Audit Resources

According to Table 3, more than 48.9% of respondents indicated that revenue authority has no enough audit staff to perform onsite audit on all taxpayers. Table 3 indicates that only small portion of the respondents (17%) was agreed that the authority has enough staffs to conduct onsite audit. For the effective and efficient tax audit, not only the skill and qualification of tax auditors but also adequate number of tax auditors, materials and equipment necessary for audit have greater impact. Table 3 shows that revenue authority has no enough materials and equipment to facilitate audit program.

Table 3
Responses on Audit Resources

| Possible measures                                                                 | Percentage (%)                  |
|----------------------------------------------------------------------------------|---------------------------------|
|                                                                                | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
| Tax administration has enough audit staff resources to perform onsite audits.     | 2.1             | 17    | 27.7    | 48.9     | 4.3               |
| Enough material and equipment for audit program.                                 | 2.1             | 17    | 29.8    | 47       | 4.1               |
| Qualified audit staffs are available.                                            | 0               | 4.3   | 29.8    | 61.6     | 4.3               |
| Well organized structure and suitable office.                                    | 2.1             | 2.1   | 27.7    | 61.7     | 6.4               |

Note. Source: SPSS Output from survey data, 2019.

Motivational Factors

As it is shown in Table 4, the respondents were in favor of the responsible citizens’ approach, such as educating taxpayers, improving relationship with public, providing necessary information about the utilization of the revenue collected, and making the collection system simple and transparent as motivational factors. More details of the results are depicted in Table 4.

Table 4 shows a significant size, 36.2% of tax auditors disagrees that “strengthening legal enforcement and penalties” by itself cannot ensure voluntary tax compliance behavior. These people rather have the belief that encouraging the responsible citizens’ approach has to be the axis of the motivational factor. Regarding the other measures almost all of the respondents agreed with the possible measures proposed in the study. It is evident from Table 4 that the majority of the respondents (70.2%) agree “improving relationship with the public” and “reducing tax rates and making the collection procedures simple and transparent” (42.6%) could motivate them to pay their fair share of taxes voluntarily. Similarly, conducting different consultation session and educating tax payers (78.7%) is another possible measure which is strongly proposed by the respondents as other motivational factors in the study.

Table 4

Responses on Motivational Factors

| Possible measures                                                                 | Percentage (%)                  |
|----------------------------------------------------------------------------------|---------------------------------|
|                                                                                | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
| Strengthening legal enforcement and penalties                                   | 8.5             | 27.7  | 19.1    | 36.2     | 8.5               |
| Improving relationship with the public.                                         | 19.1            | 70.2  | 10.6    | 0        | 0                 |
| Educating the taxpayers and conducting consultation sessions                     | 17              | 78.7  | 0       | 4.3      | 0                 |
| Reducing tax rates and making the collection procedures simple and transparent   | 42.6            | 25.5  | 23.4    | 2.1      | 6.4               |

Note. Source: SPSS Output from survey data, 2019.

Tax Compliance

Findings on tax compliance reveal that “if the tax authority has limited capability to investigate all income reported to them, so people have an opportunity to not report their exact income” regarded as the highest score value (Mean = 3.77), followed by “the amount of taxable amount and profit is declared by the taxpayer, so it is not wrong to omit or understate the taxable income and the profits declared” (Mean = 3.64), and “if one is paid in cash for a job and then not reporting it in the tax return”, it is regarded as the lowest score value(Mean=3.62).
Table 5

*Responses on Tax Compliance*

| Possible measures                                                                 | Mean  | Std. deviation | Min. | Max. |
|----------------------------------------------------------------------------------|-------|----------------|------|------|
| Since the amount of taxable amount and profit is declared by the taxpayer so, it is not wrong to omit or understates the taxable income and the profits declared. | 3.64  | 0.845          | 2    | 5    |
| If one is paid in cash for a job and then not reporting it in the tax return.    | 3.62  | 0.822          | 1    | 5    |
| If the tax authority has limited capability to investigate all income reported to them, so people have an opportunity to not report their exact income. | 3.77  | 0.666          | 21.298 | 1.2985 |
| Tax compliance                                                                   | 3.68  | 0.78           | 1.67 | 5    |

*Note.* Source: SPSS Output from survey data, 2019.

**Probability of Tax Audit**

Findings on probability of tax audit reveal that “the tax auditors, investigators, and assessors expected to perform during an audit period is detecting non-compliance behavior of individual taxpayer” regarded as the highest score value (Mean = 4.00), followed by “tax audit improves the level of compliance” (Mean = 3.89), and “high probability of audit solves the problems of tax evasion, avoidance, and other irregularities” is regarded as the lowest score value (Mean=3.85).

Table 6

*Responses on Probability of Tax Audit*

| Possible measures                                                                 | Mean  | Std. deviation | Min. | Max. |
|----------------------------------------------------------------------------------|-------|----------------|------|------|
| Tax audit improves the level of compliance.                                      | 3.89  | 0.521          | 3    | 5    |
| Tax auditors, investigators, and assessors expected to perform during an audit period is detecting non-compliance behavior of individual taxpayer. | 4.00  | 0.511          | 3    | 5    |
| High probability of audit solves the problems of tax evasion, avoidance and other irregularities. | 3.85  | 0.955          | 21.298 | 1.2985 |
| Probability of tax audit                                                         | 3.91  | 0.66           | 2.67 | 5    |

*Note.* Source: SPSS Output from survey data, 2019.

**Fines and Penalties**

Findings on fines and penalties reveal “the prospect of tough penalties deter people from evading tax” regarded as the lowest score value (Mean=3.00), “taxpayers who possess an awareness of penalties for non-compliance are more compliant than those who do not possess such awareness” regarded as the highest score value (Mean = 3.77), followed by “if there is no penalty or legal enforcement, there is a possibility that taxpayers may not pay tax” (Mean = 3.72).

**Tax Knowledge and Education**

Findings on tax knowledge and education reveal that “teaching tax evaders to deal effectively with their taxes would reduce future offences” regarded as the highest score value (Mean = 4.43), followed by “the awareness of tax audit makes the taxpayers to render a satisfactory return” (Mean = 4.13), “tax evasion could be best handled though informing & encouraging tax payers to comply voluntarily” (Mean = 4.06) and “tax audit performed in tax administrations is to educate taxpayers” is regarded as the lowest score value (Mean=3.83).
Table 7
Responses on Fines and Penalties

| Possible measures                                                                 | Mean | Std. deviation | Min. | Max. |
|----------------------------------------------------------------------------------|------|----------------|------|------|
| The prospect of tough penalties would deter people from evading tax.              | 3.00 | 0.885          | 2    | 5    |
| Tax payers who possess an awareness of penalties for noncompliance are more compliant than those who do not possess such awareness. | 3.77 | 0.666          | 2    | 5    |
| If there is no penalty or legal enforcement there is a possibility that tax payers may not pay tax. | 3.72 | 0.772          | 21.298 | 1.2985 |
| Fines and penalties                                                              | 3.50 | 0.77           | 2    | 5    |

Note. Source: SPSS Output from survey data, 2019.

Table 8
Responses on Tax Knowledge and Education

| Possible measures                                                                 | Mean | Std. deviation | Min. | Max. |
|----------------------------------------------------------------------------------|------|----------------|------|------|
| Teaching tax evaders to deal effectively with their taxes would reduce future offences. | 4.43 | 1.098          | 1    | 5    |
| Tax evasion could be best handled though informing & encouraging tax payers to comply voluntarily. | 4.06 | 0.639          | 3    | 5    |
| The awareness of tax audit makes the taxpayers to render a satisfactory return.   | 4.13 | 0.494          | 3    | 5    |
| Tax audit performed in tax administrations is to educate taxpayers.               | 3.83 | 0.601          | 21.298 | 1.2985 |
| Tax knowledge and education                                                      | 4.11 | 0.71           | 2.25 | 5    |

Note. Source: SPSS Output from survey data, 2019.

Correlation Statistic

Correlation statistics is a method of assessing the relationship between variables/factors. To be precise, it measures the extent of association between the ordering of two random variables. Thus, the study analyzed the relationships that are inherent among the independent and dependent variables as well as among the independent variables/factors. The results regarding this were summarized and presented in Table 9.

Table 9
Correlation Statistics

|                      | TAXCOMP       | TAXAUDIT       | PENALTY       | TAXKNOW       |
|----------------------|---------------|----------------|---------------|---------------|
| TAXCOMP              | Correlation Coefficient | 1.000 | 0.299* | 0.604** | 0.316* |
| Sig. (2-tailed)      | 0.041         | 0.000          | 0.030         |               |
| N                    | 47            | 47             | 47            | 47            |
| Correlation Coefficient | 0.299*       | 1.000          | -0.059        | 0.118         |
| TAXAUDIT             |               | 0.041          | 0.693         | 0.429         |
| Sig. (2-tailed)      |               | 0.000          | 0.693         | 0.239         |
| N                    | 47            | 47             | 47            | 47            |
| Correlation Coefficient | 0.604**      | -0.059         | 1.000         | 0.175         |
| PENALTY              |               |                |               |               |
| Sig. (2-tailed)      | 0.000         | 0.693          | 0.239         |               |
| N                    | 47            | 47             | 47            | 47            |
| Correlation Coefficient | 0.316*       | 0.118          | 0.175         | 1.000         |
| TAXKNOW              |               |                |               |               |
| Sig. (2-tailed)      | 0.030         | 0.429          | 0.239         |               |
| N                    | 47            | 47             | 47            | 47            |

Notes. Correlation is significant at the 0.05 level. *Correlation is significant at the 0.01 level. Source: SPSS Output from survey data, 2019.
Spearman correlations results in Table 9 showed that tax fines and penalties was positively and significantly correlated to tax compliance \( (r=0.604, \ p<0.01) \). Thus, tax penalty had 60.4% positive relationship with tax compliance. Probability of tax audit was the second component to be positively related with tax compliance \( (r = 0.299, \ p<0.05) \) an indication that tax audits had 29.9% significant positive relationship with tax compliance. Finally, tax knowledge was significantly & positively correlated to tax compliance \( (r = 0.316, \ p < 0.05) \). Therefore, tax compliance cost had 31.6% positive relationship with tax compliance.

Results of Regression Analysis

A multiple linear regression model was used to predict tax compliance in the study. The prediction was carried out basing on the effect of the three independent factors: probability of tax audit, tax fines, and penalties and tax knowledge and education. In addition, the \( \beta \) coefficients for each independent variable generated from the model was subjected to a \( t \)-test, in order to test each of the hypotheses under study. The study thus came up with a model summary, the ANOVA and the regression model as presented in Tables 10, 11, and 12.

From Table 10, the result shows that the R-Square with a value of 0.628 implies that about 62.8% of the changes in tax compliance could only be explained by repressors namely; probability of being tax audited (TAXAUDIT), penalties and enforcement (PENALTY) and tax knowledge and education (TAXKNOW) while about 37.2% of the changes in tax compliance (TAXCOMP) could be explained by other factors not included in the model.

| Model | R    | R-Square | Adjusted R-Square | Std. error of the estimate |
|-------|------|----------|-------------------|---------------------------|
| 1     | 0.792* | 0.628 | 0.602 | 0.42061 |

Notes: *Predictors: (Constant), TAXKNOW, TAXAUDIT, PENALTY. Source: SPSS Output from survey data, 2019.

The ANOVA model in Table 11 showed that the regression model was also adequate. The effect size of the regression model was shown to be over 24 that contributed by the residual mean sum of squares. The F-ratio was 24.152. This represented the effect size of the regression model and was significant with a \( p \)-value of 0.000.

| Model | Sum of squares df | Mean square | F    | Sig.  |
|-------|------------------|-------------|------|-------|
| Regression     | 12.818 | 3 | 4.273 | 24.152 | 0.000* |
| Residual      | 7.607  | 43 | 0.177 |       |       |
| Total         | 20.426 | 46 |       |       |       |

Notes. *Dependent Variable: TAXCOMP; *Predictors: (Constant), TAXKNOW, TAXAUDIT, PENALTY.

Coefficients Model

The regression results in Table 12 show that each of the predicted parameters in relation to the independent factors were significant; \( \beta_f = 0.303 \) \( (p\text{-value} = 0.002 \) which is less than \( \alpha = 0.05 \) which implies that we reject the null hypothesis stating that there is no significant relationship between probability of tax audit and tax compliance. This indicates that for each unit increase in probability of tax audit, there is 0.303 units increase in tax compliance.
Table 12 also shows that $\beta_2 = 0.664$ ($p$-value = 0.000 which is less than $\alpha = 0.05$) which indicates that we reject the null hypothesis stating that there is no significant relationship between tax fines and penalties and tax compliance. This implies that for each unit increase in tax fines and penalties, there is up to 0.664 unit increase in tax compliance.

The value of $\beta_3 = 0.204$ ($p$-value = 0.037 which is less than $\alpha = 0.05$) which implies that we reject the null hypothesis stating that there is no significant relationship between tax knowledge and education and tax compliance. This indicates that for each unit increase in tax fines and penalties, there is up to 0.204 units increase in tax compliance.

Table 12

| Coefficient Model | Unstandardized coefficients | Standardized coefficients | T  | Sig. |
|-------------------|-----------------------------|---------------------------|----|------|
|                   | B                           | Std. error                | Beta |      |      |
| (Constant)        | -2.270                      | 0.905                     | -2.508 | 0.016|
| TAXAUDIT          | 0.436                       | 0.134                     | 0.303 | 3.258| 0.002|
| PENALTY           | 0.809                       | 0.115                     | 0.664 | 7.008| 0.000|
| TAXKNOW           | 0.365                       | 0.170                     | 0.204 | 2.150| 0.037|

Note. a Dependent variable: TAXCOMP.

Discussion of the Findings

The probability of tax audit has no significant effect on tax compliance. Research findings are not in agreement with the hypothesis since probability of tax audit has coefficient estimate ($\beta_1 = 0.303$, $p$-value =0.002), audit probability have positive effect on tax compliance, thus the higher the potential audit probability, the greater discouragement for potential tax evasion. Therefore, the hypothesis that audit probability has no significant impact on tax compliance behavior of tax payers has been rejected. Probability of audit plays a significant role in reporting behavior as taxpayers will declare everything if they perceive that they will be one of the auditees in that particular year.

Tax fines and penalties have no significant effect on tax compliance. Research findings are not in agreement with the hypothesis since fines and penalties has coefficient estimate ($\beta_2 = 0.664$, $p$-value =0.000), hence Hypothesis 2 does not hold. Higher fines simply reduce the cases of tax evasion thus encouraging tax compliance. The higher the penalty and the potential audit probability the greater the discouragement for potential tax evasion.

Tax knowledge and education has no significant effect on tax compliance. Research findings are not in agreement with the hypothesis since tax knowledge and education has coefficient estimate ($\beta_3 = 0.204$, $p$-value =0.037). A high level of tax knowledge and education contributes immensely to tax compliance. Once individuals have the knowledge pertaining the importance of taxation, they will be influenced to comply without any enforcements or pressure on them.

Conclusions and Recommendations

Conclusions

These study findings provide direct evidence that probability of tax audit is a contributory factor in tax compliance, and an indication of its magnitude effect. From the study findings, there is enough proof to
conclude that probability of tax audit is associated with high levels of tax compliance.

The study also provides some preliminary evidence that fines and penalties play a vital role in improving tax compliance. Specifically, for a tax system with fair tax rates of fines and penalties, tax compliance is likely to improve.

Finally, the study concludes that tax knowledge and education has a significant effect on tax compliance. It is therefore prudent for the tax system to enhance education on how to file tax returns and the importance of paying tax.

**Recommendations**

An effective compliance program requires tax administration to have sufficient powers that enable it to enforce compliance effectively. To encourage compliance, it is important that tax authority administers the law fairly. The tax authority needs to be strong enough in order to implement the tax law effectively and efficiently. Functions, such as tax assessment, collection, awareness creation, providing information and enforcement has to performed effectively and efficiently, so that it will be perceived as strong and powerful by the taxpayers.

In addition to this, efficient service delivery to taxpayers is a key factor against which the strength of the authority is judged. Taxpayers tend to evade to the extent they feel that the authority is weak and unable to enforce the law. This directly motivates non compliers to continue evading. Hence, to create an efficient tax administration, the tax authority needs to strengthen itself by educating and training its employees, by computerizing its operations and by devoting additional resources.

There should be more preventative education for the public and increased awareness of tax responsibilities. Tax payers should be educated early in their career about tax responsibilities. Only through tax education concepts of taxation and tax knowledge can be communicated. Furthermore, taxpayers need more information about their tax obligations and their role in promoting the growth of the economy of the country and the well-being of its citizens. The tax education can be a tool to motivate voluntary compliance by taxpayers. In the context of reaching to the society at large, the tax authority can use the electronic media, such as radio, television, etc. as a means to educate taxpayers and change their perceptions about taxation. All of these promote a positive view to voluntary compliance. This is to teach in citizens a sense of responsibility toward taxes.

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