

External Factors Affecting Voluntary Taxpayers Compliance: The Case of Amhara National Regional State Revenue Authorities

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Abstract

Audit productivity, tax investigation and criminal penalty can play a major role in improving voluntary taxpayer's compliance by impacting taxpayer behavior. The study has attempted to examine the impact of audit productivity, tax investigation and penalty on improving voluntary taxpayer's compliance by using secondary macro data. To analyze the data the descriptive statistics and inferential statistical analysis method was employed. The descriptive result of the study shows that there were lack of sufficient personals in the authority, low performance of audit coverage, increasing performance of audit productivity, inconsistent result of tax investigation and penalty. The Pearson correlation and multiple regression result shows the level of voluntary tax compliance is significantly related with audit productivity, tax investigation and penalty. The study concludes that since the contribution of audit productivity, tax investigation and penalty on improving voluntary tax payer's compliance is significant among other measures, revenue authorities of the region and other concerned parties should give more emphasis on the role of tax auditors, tax investigators and tax penalty officials by fulfilling the required staff and qualifications to improve voluntary tax payer's compliance and thereby increasing regions revenue through tax.

Keywords: Audit productivity; Tax investigation; Criminal penalty; Voluntary taxpayer's compliance

Introduction

Statement of the problem

The major economies of the world are built and supported by a sustainable system of revenue generation. One major sustainable means of revenue generation globally is taxation. Tax is a contribution to the government without expectation of direct benefit had it been right no rational person may be willing to pay tax. When it obliges tax payers to pay their tax, as much as possible tax payers are in a position to reduce their tax liability, which indirectly implies voluntary compliance to be low. Economic and psychological studies explained various external and internal factors contributing to tax compliance; the former stressed on the relevance of external variables such as tax rate, income and probability of audits and severity of fines and the latter concerned on internal variables such as; taxpayers' knowledge of tax law, their attitudes towards the government and taxation, culture, personal norms, perceived social norms and fairness, as well as motivational tendencies to comply are determinants factors shaping tax behavior. According to Amhara national regional state, summery of tax compliance for category A and category B tax payers is very low in the first GTP. From 2005 E.C to 2007 E.C tax year tax payer's behavior in comparison accounts only 9.95%, 8.94% and 11% during 2005, 2006 and 2007 E.C, respectively. This indicates tax payer's compliance in the region during the last 3 years was low. This signifies for taxation to be effective in achieving both short and long term goals in any economy, the level of tax compliance must be improved for efficient tax administration. Hence, the intent of this study is to analyze the major external factors affecting voluntary tax payer's compliance in Amhara region revenue Authority.

Objective

The objective of the study is to analyze external factors that affect voluntary compliance of tax payers with special reference to Amhara region Revenue Authorities.

Specifically it intends to;

Examine the effect of audit productivity on voluntary tax payers compliance.

Analyze the impact of tax investigation on voluntary tax payers compliance.

Analyze the impact of criminal penalty on voluntary tax payers compliance.

Methodology

Since the aim of this study is to examine the degree of relationships among variables by developing research hypotheses from existing literatures; deductive approach is seen as suitable, it is quantitative in nature and analytical survey strategy to examine the extent of this relationships between dependent and independent variables empirically by developing multiple linear regression models.

It is based on secondary data mainly collected from report of Amhara region revenue authority for the period under consideration 2003-2007 E.C (2010/11-2014/15 G.C) this time is purposively selected because relatively better documented information is obtained within the authority than before about the variables of interest and about all categories of taxpayers.

Collected data has been analyzed by using descriptive statistics to describe the existing situation and multiple regression analysis has also been used to establish an empirical relationship between voluntary tax compliance, dependent variable, and Audit productivity, Tax investigation, Criminal Penalty as independent variables.

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Research hypothesis and model specification

H1: Audit productivity significantly affects voluntary tax payer's compliance.

H2: Audit investigation significantly affects voluntary tax payer's compliance.

H3: Criminal Penalty significantly affects voluntary tax payer's compliance.

This research was used the following linear multiple regression model to examine the impact of independent variables on voluntary tax compliance

$$VTC = \beta_0 + \beta_1(AP) + \beta_2(TI) + \beta_3(CPt) + \epsilon_i$$

Where:

VTC=Voluntary Taxpayers compliance: is the dependent variable which is a scale variable with a value measured in terms of total tax liabilities presented by tax payers category A and B divided by total tax payers of category A & B the tax period.

β_0 =intercept of the regression line

β_1 to β_3 =slope coefficient of the regression line

AP=Audit productivity: is a scale variable measured in terms of amount of tax collected (the difference between tax amount submitted tax payers and the amount of tax after audited based on book of account submitted by tax payers).

TI=Tax investigation: is a scale variable measured in terms of tax amount collected due to special tax investigation.

CPT=Criminal Penalty: is a scale variable measured in terms of number of criminal penalties during the tax period.

ϵ_i =is the error term associated with the i^{th} observation.

Related Literature Review

Theoretical and empirical studies

This section presents the theoretical and empirical literatures reviews related to tax compliance. Verboon and Dijke stated that tax compliance is the willingness of individuals to comply with relevant tax authorities by paying their taxes. Others like, Alm [1] and Jackson and Milliron [2] defined tax compliance as the reporting of all incomes and payment of all taxes by fulfilling the provisions of laws, regulations and court judgments. In addition to these, Singh defined as 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.

Theoretically the above definitions of tax compliance are acceptable. However, when it comes to the obligations imposed on them by law, taxpayers are not always compliant. Most tax payers are not paying their tax liabilities voluntary because of lack of understanding the benefits of being compliant. Literature on "tax compliance benefits" categorized benefits into three broad categories, namely cash-flow benefits; the benefits derived from the use of tax revenues for a period before they must be paid over to the revenue authority, such as property tax collected by banks or supermarkets, the deduction of "pay-as-you-earn tax" (PAYE) by employers and VAT by vendors, before these are paid over to the relevant revenue authority, managerial benefits; that may arise due to a requirement in terms of tax legislation to maintain records, such

as better recordkeeping, the use of technology, improved knowledge of the financial affairs of the business in particular in the form of increased knowledge of their complex accounting information systems and improved business or managerial decisions, and tax deductibility benefits; the benefits that arise when the income tax system permits some tax compliance costs to be treated as a legitimate deduction for tax calculation purposes, for example where the tax system permits a business a deduction for the services of their tax practitioners and tax-related incidental expenses from their taxable income.

For taxation to be effective in achieving both short and long term goals in any economy, the level of tax compliance must be improved for efficient tax administration. One measure that can be used to improve the level of tax compliance is tax audit.

Alm et al. [3] investigates 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 et al. [4] examines 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 [5] examines that early experience of audits in taxpayers' "tax life" is a more effective way to increase compliance than later audits. Also Kastlunger et al. [6] study of experimental research also suggests that, although the effectiveness of audits and fines cannot be completely confirmed, early audits in taxpayers' "tax life" have a positive impact on compliance.

Questionnaire based research by using descriptive statistics, result shows that the relevant tax authority (RTA) employed tax audit towards achieving target revenue, that tax audit reduce the problems of tax evasion, that tax payers do not usually cooperated with tax audit personnel during the exercise [7].

Audit productivity, tax investigation and penalty are important because of its support to the government in collecting better tax revenue essential for budget, maintaining economic and financial order and stability, to ensure that satisfactory returns are submitted by the tax payers, 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.

In Ethiopia, there are three studies reviewed regarding tax audit in different settings. Yesegat [8] studied VAT administration problems at large, VAT audit in particular, Gebeyehu studied tax audit and its role in increasing government revenue in Ethiopia and Mihret [9] examines tax audit practice in Ethiopia.

However, audit productivity, tax investigation and penalty impact on improving voluntary taxpayer's compliance not yet widely studied in Ethiopian case in general and in Amhara region in particular. Given this gap of knowledge, together with the fact that improving voluntary tax payer compliance is one of the most important but least studied aspects of fiscal reform in developing economies, there appears considerable potential area for research. Therefore, the intent of this study is to examine the impact of audit productivity, tax investigation and penalty on improving tax payers' compliance in Amhara region using secondary macro data.

Data Presentation, Analysis and Discussion

Descriptive statistics

The following chart presents the status of Amhara National Regional State revenue authority. It shows that out of 5,361 employees required to conduct effective tax collection only 4,293 (80.08%) was occupied. The remaining 1,068 (19.92%) was vacant position. This vacant position negatively affects the tax collection activities. This vacant position negatively affects the tax collection activities. For example, the position of tax auditors covered only 80.19 % (251) out of 313.

When we compare total book of account submitted by tax payers with the number of auditors; one auditor on average audited 154 books of accounts (total book of account /total auditor=38,832 /251). Furthermore, on average one book of account requires 6 days; this indicates 38,832 book of account requires 232,992 days on average. But one auditor to the maximum can do only 288 days per year. This shows that the total maximum audited file per year per auditor $38,832/288=135$. This point out that from the total book of accounts submitted 154 being audited only 135 was audited. The remaining 19 books of account per auditor did not audited.

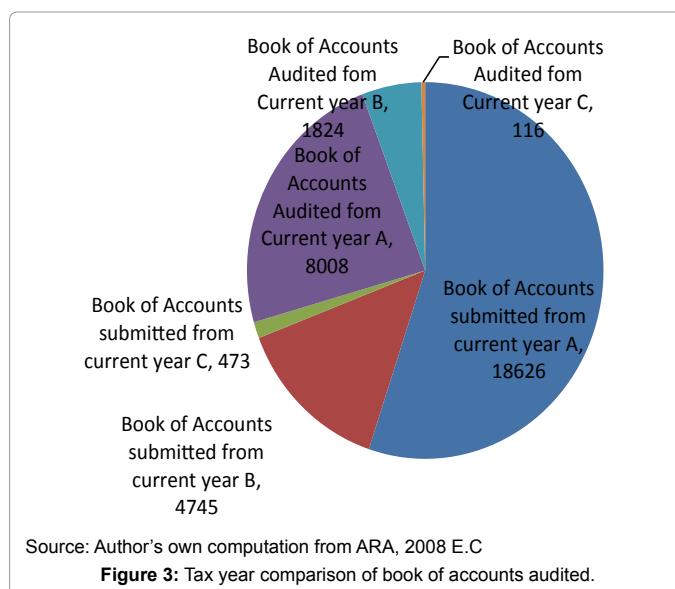
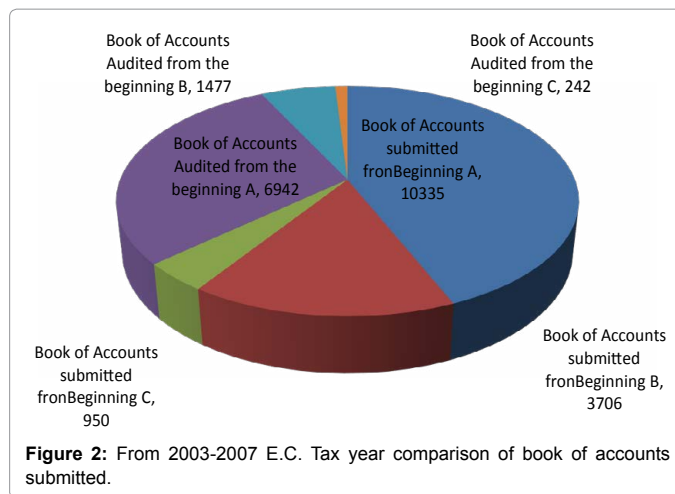
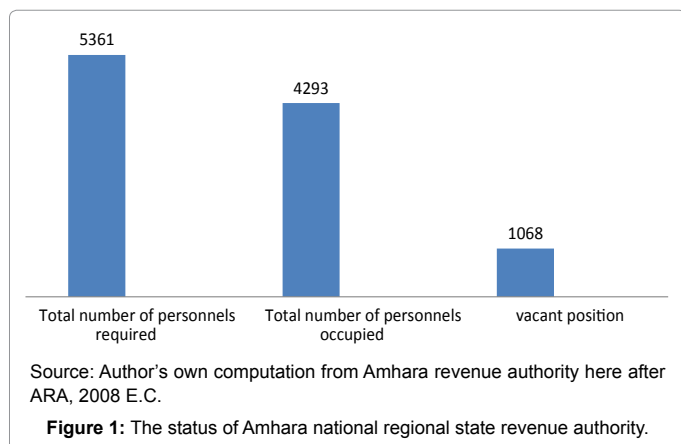
In general, when there is lack of required tax auditors in the authority, tax payers are not willing to pay their tax liability on time because of their judgment of being not caught by auditors (Figure 1).

Audit coverage

The audit coverage performance from the total book of accounts being audited during the year 2003-2007 E, C. shows 49.5%, 40.2%, 38.7%, 50.4% and 51.5%, it was not satisfactory and also its performance was inconsistent. The main reason for this were the presence of unoccupied position, unbalanced number of book of accounts present by tax payers and tax auditors, the types of audit followed by the authority (following comprehensive audit), lack of budgets at zonal level and lack of tax payers commitment to submit their required documents at the stipulated time. Due to these problems and other factors audit coverage of the authority is low. When the audit coverage becomes low, when the book of amounts submitted by tax payers were not audited as soon as during submission, tax payers would not voluntarily declare their tax liability on time because of expectation of delay by the office (Figures 2 and 3).

Audit productivity

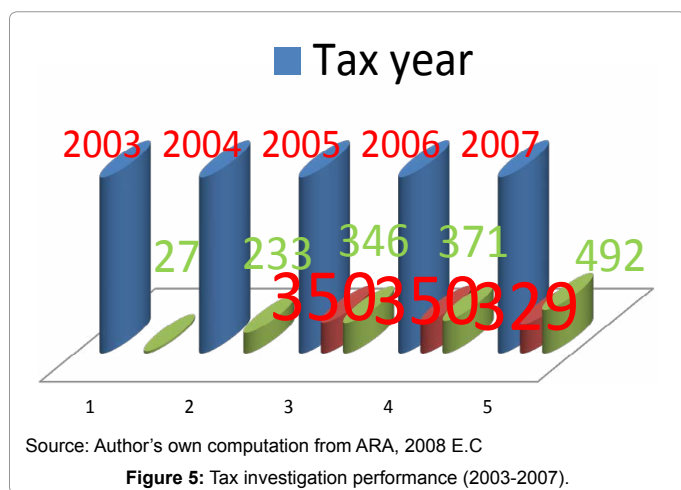
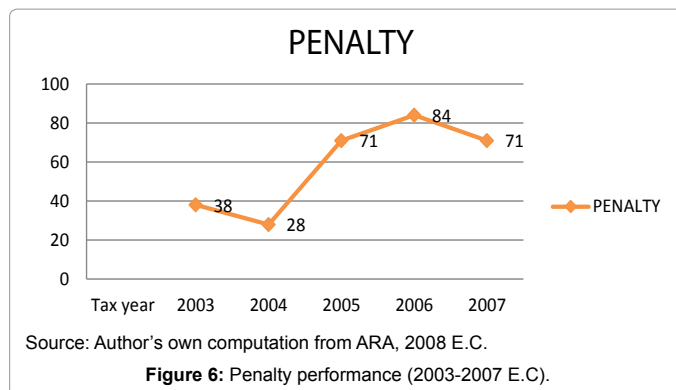
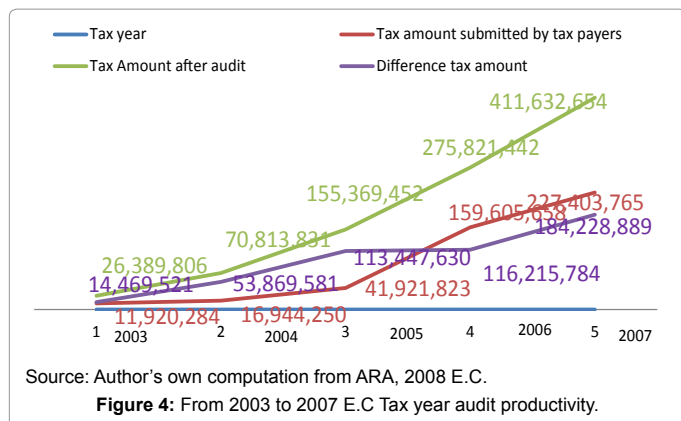
The authorities audit productivity during the first GTP was increasing from year to year. Figure 1 below shows this fact during the



first GTP. The figure points out that the amount of tax revenue due to audit during the first three consecutive years were more than twice of the amounts submitted by tax payers. After 2006 even though there were differences, the difference was less than the amounts submitted by tax payers. These indicated that when tax payers are continuously audited they tend to voluntarily declare approximately the correct amount of their tax liability (Figure 4).

Tax investigation

When tax investigation is no strong, tax payers tend to evade because they are expecting no one can go there business premises for detailed examination of their source documents as auditors examine only weather submitted book of accounts follow rules and regulation of the authority than business activities and premises. The following chart about tax investigation of the authority during 2003-2007 E.C shows increasing. The Chart shows the number of tax investigations that was planned and actually performed. According to the plan their performance was high. But, the plan was not satisfactory when it is compared from the total number of tax payers in the authorities. It also indicates that when the plan increases, the performance of investigation and the amount of tax collected increases during the tax year. This implies that when the authority has high number of tax investigators



Inferential statistics

- H1: Audit productivity significantly affects voluntary tax compliance
- H2: Tax investigation significantly affects voluntary tax compliance
- H4: Criminal Penalty significantly affects voluntary tax compliance (Table 1).

The Pearson Correlation at the 0.01 level of significance (2-tailed) result shows there is a strong positive association between audit productivity and tax investigation and level of voluntary tax compliance. This indicates as audit productivity and tax investigation increases, the level of voluntary tax compliance increases. The Pearson Correlation at the 0.05 level of significance (2-tailed) result shows there is strong positive association between criminal penalty and level of voluntary tax compliance. This indicates that as penalty increases, the level of voluntary tax compliance increases (Tables 2 and 3).

they can perform more than these amount taxes investigations. For example, during 2003 E.C the authority without plan by investigating 27 tax payers they were collect Birr 773,704.49. For the year 2007 E.C by investigating 492 tax payers they were collected Birr 24,288,165.29. These in general indicated that to what extent tax investigation is important for increasing tax revenue directly and then voluntary tax compliance (Figure 5).

According to the model summery adjusted R2 is 94.8% it is also shown that all independent variables are significant it is checked by p value and t value.

Criminal penalty

The regression equation:

$$VTC = \beta_0 + \beta_1 (AP) + \beta_2 (TI) + \beta_3 (Pt) + \epsilon_i$$

Another mechanism of educating and improving tax payer's voluntary compliance is appropriate penalty. According to their plan the authorities was good in this regard. But due to lack of sufficient number of qualified personnel in the position especially at zonal areas the appropriate penalty was not performed. Whenever zonal office made a mistake, regional office takeover the work, this creates inconsistency in penalty this in turn results inconsistent tax compliance. When there is high penalty in the current year voluntary tax compliance increases in the next year and then penalty decreases. When the number of penalty decreases in the current year, voluntary tax compliance decreases, and penalty increases in the following year. The consecutive high number of penalty increases voluntary tax compliance and then decreases number of penalty in the next tax year. The following figure points out these facts (Figure 6).

Audit productivity

Due to criminal penalty the authority was collected Birr 68,525,245.81 by penalizing tax criminal of 340 from 2003-2007 E.C.

One of the objectives of this study is to examine the impact of audit productivity on level of voluntary tax compliance. The regression result confirms that audit productivity is positively related with the level of voluntary tax compliance. The implication here is that the existence of better audit productivity in the revenue authority improves the level of voluntary tax compliance. When difference exist between amount submitted by tax payers and the amount after audit based on book of account, tax payers are liable to pay the difference plus any additional penalty imposed by tax authorities. This discourages tax payers from doing illegal acts in the next tax period and then improves voluntary tax compliance. The relationship between voluntary tax compliance and audit productivity has been the interest of many tax literatures. For example in Allingham and Sandmo [10] taxpayers will always declare their income correctly if the probability of finding is high. These findings affirmed that in self-assessment systems, tax audits can play an essential role and their essential role is to increase voluntary compliance. Frequencies and strictness of audits could encourage taxpayers to be more prudent in completing their tax returns, reporting all income and claiming the correct deductions to ascertain their tax liability.

	Voluntary tax compliance	Audit productivity	Tax investigation	Criminal penalty
Voluntary tax compliance	1			
Audit productivity	0.559**	1		
Tax investigation	0.499**	-0.321*	1	
Criminal penalty	0.256*	-0.520**	.536**	1

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Table 1: Pearson Correlation Result of all independent variables and Voluntary tax compliance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.975 ^a	0.951	0.948	0.000905	0.951	359.564	3	56	0.000	0.234

^aPredictors: (Constant), Penalty, Audit productivity, Tax investigation.

^bDependent Variable: Voluntary tax compliance.

Table 2: Model summary^b.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	12.01	3.001	0.07	13.017	0					
Audit productivity	3	8	0.983	28.214	0	0.559	0.967	0.838	0.727	1.376
Tax investigation	3.009	1	0.566	16.058	0	0.499	0.906	0.477	0.71	1.408
Criminal Penalty	4.001	2	0.465	11.891	0	0.256	0.846	0.353	0.578	1.732

^aDependent Variable: Voluntary tax compliance.

Table 3: Coefficients^a.

Tax investigation

The regression result presents a positive relationship between tax investigation and voluntary tax compliance [11]. This reveals that the better existence of tax investigation, the better improvement of level of voluntary tax compliance. Field auditors or investigator ascertain the correctness of returns not only by examining books of account records, but also by visiting taxpayers' business premises. This approach provides a more thorough understanding of business operations and hence facilitates the detection of cases where tax evasion or avoidance is involved. At the same time, it gives the department's enforcement activities a more visible presence, and consequently encourages the correct returns [12]. Tax investigation work is normally focused on the most recent year of assessment for which a tax return has been submitted.

Criminal penalty

Criminal penalty found to be positively related to the level of voluntary tax compliance [13]. This indicates that with the existence of criminal penalty in the authority, there is better improvement of voluntary tax compliance [14]. Criminal penalty is not the objective of the authority while the higher the penalty and the potential audit probability the greater the discouragement for potential tax evasion.

Conclusion and Recommendation

The major economies of the world are built and supported by a sustainable system of revenue generation. Taxation is one major sustainable means of revenue generation globally. One of the more vexing problems for policy makers in developing and transition economies is encouraging high levels of tax compliance. This study has attempted to examine external factors affecting voluntary tax payer's compliance: the case of Amhara National Regional State Revenue Authority's in First Growth and Transformation Plan. Data were collected by secondary source of data for the year 2003-2007 E.C and analyzed using multiple OLS regression statistical method.

The study revealed that there is lack of sufficient personals in the authority. With insufficient staff, tax authorities cannot improve voluntary tax payers' compliance and there by tax revenues. Therefore, for better improvement of voluntary tax payer's compliance, tax authorities and the concerned bodies must fulfill at least the required position.

The audit coverage performance is not satisfactory and also it is inconsistent performance. When the audit coverage is low, voluntary tax payer's compliance becomes low. Therefore, in order to increase voluntary tax payers compliance, tax authorities and the concerned bodies should pay due attention.

The authorities audit productivity is increasing from year to year. Since audit productivity has significantly influencing voluntary tax payer's compliance, the authorities should continue on this regard.

Tax investigation performance of the authority shows increasing but, the plan was not satisfactory when we compare it from the total number of tax payers of the authorities. Because of the direct impact of tax investigation on improving voluntary taxpayer's compliance, the authorities must plan the appropriate tax investigation as the proportion of tax payers of the region at least major suspected default areas.

Criminal penalty of the authority has limitation and inconsistent results. In order to avoid this inconsistent result and then for better improvement of voluntary tax payer's compliance, tax authorities and the concerned bodies must be more emphasized on zonal officials by helping through showing how to investigate tax incremental or illegal activities instead of doing on behalf of them.

The study concludes that voluntary taxpayer's compliance increases at decreasing rate. Since the contribution of audit productivity, tax investigation and criminal penalty on improving voluntary tax payer's compliance is significant among other measures.

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