

# The Effect of Tax Administration on Tax Revenue Performance in Rwanda

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**Abstract:** *The Government of Rwanda continued to carry out tax reforms over the years with an aim of improving taxation efficiency and increasing the amount of revenue raised to finance the government expenditure. In year 2000, The Rwanda Revenue Authority (RRA) embarked on the decentralization process and further strategies were implemented such as Taxpayers education and electronic tax system to mobilize and increase tax revenue collections. However, despite the RRA employed strategies, the failure to collect all the potential tax revenue is persisting, and the tax-to-GDP ratio is lower than their target, EAC and SSA average ratio. The purpose of this study was to establish the relationship between the Tax Administration and Tax Revenue Performance in Rwanda. The population of the study consisted of 1,093 RRA staff reported by the Human Resource department (2017). This population consisted of RRA staff involved in day-to-day Tax Administration in Rwanda. It included Commissioners and Deputy Commissioners, Senior Officers, Officers. The sample size comprised staff from all RRA departments. The sample size was 400 respondents. The respondents composed by of 10 commissioners and deputy commissioners, 157 Senior Officers, and 233 Officers. Primary data was collected from the responses of the questionnaires and oral interviews to measure the effectiveness of Tax Administration and the level of Revenue performance in RRA. Data was collected from the primary source compiled, sorted, edited for accuracy and clarity, classified, coded into a coding sheet and was analyzed using a Statistical Package for Social Science (SPSS 16.0). And strong positive relationship between variables was observed. In conclusion, there is a strong positive relationship between tax administration and tax revenue performance, this implies that if the level of Tax administration is high, performance in tax revenue is also high and if the level of Tax Administration is low, the performance is also low. Therefore Tax administration is a matter of serious concern to take care of by many developing countries, to raise tax revenues for developmental purposes. The four independent variables that were studied, explain 85.8% of variance in tax revenue collection as represented by the  $R^2$ . This therefore means that other factors not studied in this research contribute 14.2% of variance in tax revenue collection. The  $F$  critical at 5% level of significance was 5.33. Since  $F$  calculated is greater than the  $F$  critical (value = 595.655), this shows that the overall model was significant. The significance is less than 0.05, thus indicating that the predictor variables, explain the variation in the dependent variable which is Tax Revenue Collection. In conclusion, there is a strong positive relationship between tax administration and tax revenue performance. The management should understand that proper tax administration is necessary in order to raise adequate tax for social and economic development of the country. Rwanda Revenue Authority management needs to determine what actions to do to ensure that it collects sufficient tax revenue.*

## 1. Background of the Study

Developing countries across the world typically suffer from insufficient supply of internal resources. Despite much effort, many countries fail to raise sufficient revenues to finance the government budgets and to support the development needs of the country. This incapability is a major hindrance for the government's regular operations and for the capacity to accelerate economic growth initiatives (Haque, 2012). For most developing countries, taxation goes hand-in-hand with economic growth and taxes are lifeblood for governments to deliver essential services and to make long-term investments in public goods (OECD, 2010; Paepe & Dickinson, 2014). Some of the countries in Latin America region that are on a fiscally sustainable path, revenues appear inadequate to fund a socially sustainable level of provision of public services (Ter-Minassian; 2012).

The United Nations considers that achieving the Millennium Development goals (MDGs) requires developing countries to raise at least 20% of their gross domestic product (GDP) in tax revenues. Several Asian and Latin American countries and some of sub-Saharan African countries still mobilize less than 17% of their GDP in tax revenues hence making it difficult to finance public projects (Paepe & Dickinson, 2014). Very low tax to gross domestic product GDP ratio is a common characteristic of most of the developing countries (Ter-Minassian; 2012). For example, over the past few

years, lower than projected tax revenue has forced the government of Tanzania to cut its ambitious plans which reduced its capacity to finance public projects. Similarly, despite the fast economic growth of Uganda, its tax to GDP ratio is still low (11% in 1997 to 13% in 2015) (Mwenda, 2015); and even Kenya the leading country in East-Africa, the tax to GDP ratio is still lower than the East African region ratio target of about 25% (African -Economic Outlook, 2015).

In the same region, according to African -Economic Outlook (2015), Tax to GDP ratio for Rwanda was 13.9% in (2014) and 14.8% (2015) which was lower than the 14.9% and 15.4% target respectively. This is still lower than Sub Saharan Africa (SSA) average of about 20% (The Government of Uganda, 2015) and the East African region target of about 25% (2014). In comparison with other East African Countries like Kenya which has a Tax to GDP ratio of about 20.1% (2014) and Tanzania 18.6% (2014) the Tax to GDP ratio for Rwanda is still low.

The low tax to GDP ratio for Rwanda shows that a lot of tax remains uncollected, despite the fact that the government has put in place a number of interventions to increase the ratio and reduce the aid dependency. These measures include Taxpayer education in form of dialogues with stakeholders, seminars, and others to mobilize tax, to reduce tax evasion and to increase tax compliance; and also online facilities like

e-filing and e-payment, e-clearance, e-billing machine and online registration were farther introduced to simplify the process of paying taxes, reduce costs, reduce time taken by taxpayers for declaration and payment of tax, and to increase domestic revenue (Kagarama, 2013). According to Rwanda Auditor general's report 2015, the failure to collect all potential revenue, could be linked to Tax Administration system characterized by lack of proper tracking of registered taxpayers for domestic taxes and gaps in existing databases of taxpayers; failure to register some taxpayers and yet RRA was aware of their existence; failure to verify majority of declarations and to follow up taxpayers who had not filed their returns or remained inactive since the time of their tax registration; capacity challenges in tax audits leading to low tax audit coverage and many contested audit results which resulted in reduction in amounts of tax assessed in 145 cases by RRA appeals committee (43% of all contested cases); and weak revenue protection system which is highly dependent on informers instead of generating and reviewing exceptional reports from existing systems to provide more preventive revenue protection strategies. Low tax to GDP has been linked to poorly administered tax system characterized by low tax audits, complicated tax system and thereby discouraging compliance and contributes to difficulties in raising tax revenues in Latin American region (Aggrey, 2011; Ter-Minassian, 2012).

In Nigeria and Zimbabwe, the research findings show that those working in informal sector do not find the need of paying tax whereas it is the largest and growing component in economy and this leads to the revenue loss (Dube, 2014; Abiola&Asiweh, 2012).

Could the tax revenue performance in Rwanda be due to the above stated inadequacy in other countries? This research was relevant since it was seek to establish the relationship between Tax, Administration and Tax Revenue Performance in Rwanda.

## 2. Statement of the problem

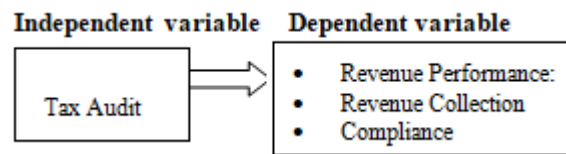
The Government of Rwanda continued to carry out tax reforms over the years with an aim of improving taxation efficiency and increasing the amount of revenue raised to finance the government expenditure.

In year 2000, The Rwanda Revenue Authority (RRA) embarked on the decentralization process and further strategies were implemented such as Taxpayers education and electronic tax system to mobilize and increase tax revenue collections. However, despite the RRA employed strategies, the failure to collect all the potential tax revenue is persisting, and the tax-to-GDP ratio is lower than their target, EAC and SSA average ratio. The low tax to GDP ratio implies that a lot of tax remains uncollected and so tax revenues collected are inadequate to finance government budget. For example, from 2014 to 2017 the tax to GDP ratio is averaged to 14.06% compared to EAC average of about 18%. This problem could be linked to inadequate tax registrations, tax audits, tax automation and Revenue protection system (Auditor General of Rwanda, 2015).

## 3. Objective of the Study

To measure the effect of tax audit on tax revenue performance of Rwanda Revenue Authority

## 4. Conceptual framework



### Research Design

A research design included the plan for data collection and data analysis. The study employed both quantitative and qualitative approaches. Quantitative method used to generate numerical data to ensure high levels of reliability of gathered data, and qualitative method to generate non numerical data in order to get in-depth information about the variables. The study engaged a descriptive, cross sectional and correlation research designs. It was descriptive because it used descriptive statistics to describe the two variables of the study; and it was cross sectional since it was carried out over a short period of time and data was collected as a one stop event. It engaged correlation design to establish the relationship between Tax Administration and Tax Revenue Performance in Rwanda.

### Population of the Study

The population of the study consisted of 1,093 RRA staff reported by the Human Resource department (2017). This population consisted of RRA staff involved in day-to-day Tax Administration in Rwanda. It included Commissioners and Deputy Commissioners, Senior Officers, Officers. The purpose of choosing them as the respondent was that they are usually the personnel who interface with taxpayers and enforce the legal framework promoted by legislators to administer and safeguard government revenue. The study population composed by 1093 People.

### Sample size

The formula of Yamane was used to determine the representative sample from the whole population of 83 people. 5% was used as the sampling the level of precision. 5% is taken for making the correction of voluntary and/or involuntary errors done by the respondents.

The formula used to determine the sample is written as following:

$$n = \frac{N}{1 + N(e)^2}$$

Where n: sample size

N: population= 1093

(e): level of precision =5%

This formula is written by Yamane (1967) then if the population is 1093 the sample is:

$$n = \frac{1093}{1 + 1093(0.05)^2} = \frac{1093}{2.735} = 399.634 \approx 400 \text{ respondents}$$

### Data Collection Instruments

In this study, data was collected using semi-structured questionnaires that were administered to RRA staff and a face to face interview was conducted to the key people to get depth information on the matter. Questionnaires were designed according to Likert Scale: “Strongly disagree (1), Disagree (2), Agree (3) and strongly agree (4)” to explore the key variables of Tax Administration and revenue performance. The questionnaire comprised of closed questions, Attitude questions and open questions. It comprises of four sections. Section A entails the Biodata; Section B entails Tax Administration; Section C Revenue performance and Section D entails Interview Guide.

### 5. Data Analysis and Interpretation

**Table 1:** Model Summary of tax compliance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961 <sup>a</sup>	.924	.923	.25065

a. Predictors: (Constant), Tax Audit,

Source: Primary data, 2018

Referring to the table 1, the four independent variables that were studied, explain 92.4% of variance in tax compliance as represented by the R<sup>2</sup>. This therefore means that other factors not studied in this research contribute 7.6% of variance in tax revenue collection.

**Table 2:** ANOVA<sup>a</sup> of tax compliance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	302.050	1	75.513	1201.939	.000 <sup>b</sup>
	Residual	24.816	398	.063		
	Total	326.866	399			

a. Dependent Variable: Revenue performance

b. Predictors: (Constant), Tax Audit

Source: Primary data, 2018

The ANOVA statistics shown in Table 2 was used to present the regression model significance. An F-significance value of p = 0.000 was established showing that there is a probability of 0.0% of the regression model presenting a false information. Therefore, the model is very significant.

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (Revenue performance). That is explained by independent variables (Tax audit). The F critical at 5% level of significance was 5.33. Since F calculated is greater than the F critical (value = 1201.939), this shows that the overall model was significant. The significance is less than 0.05, thus indicating that the predictor variables, explain the variation in the dependent variable which is revenue performance.

**Table 3:** Regression Coefficients<sup>a</sup> of tax compliance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.383	.067		5.707	.000
	Tax Audit	.172	.070	.130	2.457	.014

a. Dependent Variable: Tax Audit

Source: Primary data, 2018

From the regression findings from table 8, the substitution of the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3$ ) becomes:  $Y = 0.383 + 0.172X_1 + \epsilon$ . Where Y is dependent variable (revenue performance), X<sub>1</sub> is tax audit. This means that when independent variables are held constant at zero, the performance revenue collection would be at 0.172.

### 6. Conclusion

In conclusion, there is a strong positive relationship between tax administration and tax revenue performance. This implies that if the level of Tax administration is high, performance in tax revenue is also high and if the level of Tax Administration is low, then performance is also low. Therefore Tax administration is a matter of serious concern in many developing countries, there is need to improve it so as to increase capacity of their governments to raise tax revenues for developmental purposes.

### 7. Recommendations

The findings of this study provide initial directions in determining the effect of tax administration and Tax revenue performance in Rwanda. The management should understand that proper tax administration is necessary in order to raise adequate tax for social and economic development of the country. Rwanda Revenue Authority management needs to determine what actions to do to ensure that it collects sufficient tax revenue.

Tax officials must communicate corporate values and cultures related to collect tax on time, recognize and appreciate efforts and success of all employees and actively promote service quality. Commissioners must provide strong leadership and the management should frequently undertake market research for the purpose of formulating efficient policies regarding on seasonal business and tax law changes. This will enable Commissioners to provide services according to customer expectations and requirements.

Human resources development and management is another practice to be undertaken where the Commissioners should employ potential personnel in order to improve the tax administration and collection. Tax officers’ performance should be monitored and evaluated within to control loop, rewarding staff for meeting and exceeding tax collections and audit tax personnel job satisfaction regularly.

There is a close similarity between tax officers’ satisfaction and tax collectability in order to facilitate tax quality improvements. There should be an effective top down and bottom up communication between management and tax

officers and involvement of staff coming up with suggestions to improve tax collections and in recruiting tax officers. Management should consider delivering service excellence as one of the key criteria and competencies.

RRA internal communication management should strive to encourage interdepartmental communication when all RRA departments are linked properly it will encourage quick response to detect fraudulent transactions and tax evasion. The study had determined persistent factors that hinder the RRA failure to raise adequate tax for economic and social developments. The researcher recommends that further research is required in RRA to know factors that affect the accuracy, fairness and timely tax administration and collection.

## References

- [7] Dube, G. (2014). Informal Sector Tax Administration. *Wiley online library*, 48-62.
- [8] Haque, A. A. (2012). *Determinants of low tax efforts of developing countries*. Sydney: University of Sydney.
- [9] Kagarama Bahizi, B. (2013). *National Taxation Policy and Government Revenue Collection*. Kigali: Rwanda Revenue Authority.
- [10] Mwenda M., A. (2015). Uganda fastest growing economy. *New Vision*, 2
- [11] OECD. (2006). *Forum on Tax Administration's Compliance: Strengthening Tax Audit Capabilities*. Paris, France: Organization for Economic Co-operation and Development (OECD).
- [12] Paepe & Dickinson, (2011), The Increasing Imperative of Cross-Disiplinary Research in Tax administration. *eJournal of Tax research*, 122-144.
- [13] Paepe & Dickinson, (2014), *The quality of Taxpayer Services and the performance of Income Revenue Collection*. Kampala, Uganda: Makerere Press
- [14] Ter-Minassian, T. (2012). *More than Revenue*. Washington, DC, United States: Inter-American Development Bank
- [1] Abiola, J., & Asiwah, M. (2012). Impact of Tax administration on Government Revenue. *International Journal of Business and Social Science*, 3(8), 99-113.
- [2] Abiola, J., & Asiwah, M. (2012). Impact of Tax Administration on Government Revenue in Developing Economy: Nigeria. *International Journal of Business and Social Science*, 3(8), 99-109.
- [3] African Economic Outlook. (2010). *Uganda Economy*. © AfDB, OECD, UNDP, UNECA.
- [4] African Economic Outlook. (2015). *Rwanda Economy*. AfDB, OECD, UNDP.
- [5] Aggrey, J. (2011). *Determinants of Tax Revenue: Evidence from Ghana*. Accra: Cape Coast University.
- [6] Auditor General of Rwanda. (2015). *2014/2015 Annual Report*. Kigali: Government of Rwanda.