

## An investigation of the causes of tax evasion and tax avoidance in Tanzania: A case study of Magu district

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### Abstract

Tax evasion and tax avoidance, in Tanzania, has been a serious problem even before the introduction of Tanzania revenue Authority. The objective of this study was to investigate on the causes of tax evasion and tax avoidance in Magu district. The study used logit model for regression analysis, because the dependent variable was a dummy. The findings revealed that higher level of education and higher levels of income lead to low levels of tax evasion and avoidance while higher tax rates lead to higher levels of tax evasion. The study recommends that in order for the Tanzanian government to control tax evasion and avoidance, it must increase the people's incomes and educate more people. Tax rates should be reduced if cases of tax evasion have to be reduced.

**Keywords:** Tanzania, tax evasion, education, tax rate, income

### 1. Introduction

Tax evasion and avoidance is not a new practice. It has existed for centuries, dating back to two thousand five hundred years ago. During this period (two thousand five hundred years ago), while writing about tax evasion Plato said that the Ducal palace of Venice had a stone with a hole in it through which people would inform the state about those who evade taxes. In India, during the third century B.C., the state craft, *arthasastra* did advise the Mauryan kings to take good care of state revenues or else they be misappropriated by the people for their own benefit (Fjeldstad, 2006) [3].

In this 21<sup>st</sup> century the existence of tax evasion cannot be refuted too. It is so rampant that it has negatively affected countries particularly those in the developing world. Global Financial Integrity (GFI) has estimated financial losses by the developing countries through illicit financial flows to be between the regions of US \$ 859 billion to US \$ 1.06 trillion per year. Region-wise African countries are estimated to have lost US \$ 854 billion in cumulative capital flight through tax evasion and avoidance between 1970-2008 (Germany Federal Ministry for Economic Cooperation and Development, 2010) [5].

In Tanzania (an East African country) studies have shown that tax evasion is very rampant that it has negatively affected almost all sectors of the economy (Wadhawan, 1998) [16]. This includes the informal sector where tax evasion was in the range of 35-55 percent of the total revenue collected by the year 2010 (ESRF, 2010) [1]. A part from the informal sector, customs is another area where tax evasion is common. This is done by under-invoicing the custom duties at the port of entry. Reasons advanced for such a scenario include high scheduled tax rates, low salaries and lack of incentives offered to customs staff (Manamba, 2013) [11].

#### 1.1 Objectives of the study

- (i) To determine whether the high tax rate is responsible for tax evasion and avoidance
- (ii) To determine whether the level of income is responsible for tax evasion and avoidance
- (iii) To determine whether the level of education is responsible for tax evasion and avoidance.

### 1.2 Research Questions

- (i) Is the high rate of tax responsible for tax evasion and avoidance?
- (ii) Is the level of income responsible for tax evasion and avoidance?
- (iii) Is the level of education responsible for tax evasion and avoidance?

### 1.3 Research hypotheses

**H<sub>0</sub>:** Income has significant impact on tax evasion and avoidance.

**H<sub>1</sub>:** Income has no significant impact on tax evasion and tax avoidance.

**H<sub>0</sub>:** Education has significant impact on tax evasion and avoidance.

**H<sub>1</sub>:** Education has no significant impact on tax evasion and tax avoidance.

**H<sub>0</sub>:** Tax rate has significant impact on tax evasion and avoidance.

**H<sub>1</sub>:** Tax rate has no significant impact on tax evasion and tax avoidance.

### 2. Literature Review

#### 2.1 The Level of Education and Tax Evasion

Research has demonstrated that when people are educated about the importance of paying tax it (education) re-awakens them and they become more conscious and responsible in paying their taxes promptly than the uneducated ones (Stamatopoulos, *et al.*, 2015) [15]. These results corroborate those of Ibadin and Eiya who carried out a study in Nigeria and found that there is a significant relationship (at 5% level) between the level of education attained and tax compliance. The higher the education, the more tax compliant people become (Ibadin and Eiya, 2013) [8]. Low level of education makes people not to understand the importance of paying taxes. Such was the revelation of a research conducted among the self-employed people in Nigeria who were found to evade paying taxes partly because of lack of education (Oremadu and Ndulue, 2011) [12].

The Estonian case reinforces this point that many of the people with higher education levels were found to evade taxes

less often than those with less education (Kriz, *et al.*, 2007). Education obviously makes people to think beyond their personal and selfish motives and put the larger goals of the country first by having a more positive attitude towards paying taxes as a way of aiding the country in meeting its development agenda through revenue collection (OECD, 2013) [13]. Therefore tax education specifically in Tanzania is as important as broadening the tax base as it makes people understand how and why they pay taxes and how whatever percentage they are arriving at mathematically thereby prompting them to pay taxes as frequently and timely as possible. This will make the government to realise more revenue collection (Rutasitara, *et al.*, 2010) [14].

## 2.2 High Tax Rates and Tax Evasion and Avoidance

Various studies have shown that tax evasion and avoidance is partly caused by higher levels of tax rates. When governments levy higher levels of taxes it becomes burdensome for tax payers to pay prompting them to evade paying. That is in a bid to bring reforms in the tax system, the Tanzanian government embarked on reducing taxes (which were perceived to be high by tax payers) as a giving tax payers incentives to pay their taxes promptly (Fjeldstad, 2006) [3]. A study reviewing the causes of tax evasion and avoidance in developing countries concurs with those of other researchers that high tax rates reduce people's disposable income thereby making them to evade paying taxes (Federal Germany Ministry for Economic Cooperation and Development, 2010) [5]. In Pakistan for instance, a study carried out by Khan and Ahmad demonstrates that progressive taxation should be adopted in order to overcome cases of tax evasion. Among the respondents who were interviewed, 75% of them were for the introduction and enforcement of progressive taxation as a way of curbing tax evasion (Khan and Ahmad, 2014) [10]. A study which was carried out in Temeke municipality in Dar es salaam found the same results. 34% (highest) of the respondents who were interviewed attributed tax evasion to high tax rates (Stephen, 2014).

## 3. Research Methodology

### 3.1 Types of research

The researcher employed both quantitative and qualitative approaches.

### 3.2 Sources of data

The researcher employed both primary and secondary methods in collecting information.

### 3.3 Area of the study

The area of study was Magu district specifically at Magu town where tax evasion avoidance by the tax payer was found to be a serious problem.

### 3.4 Sample size

The target population included tax payers in the community who were 40 in number. Given that the number of the target population was less than one hundred, all the forty were taken as the sample size.

### 3.5 Data collection instruments

The study used a structured questionnaire as an instrument for data collection. The researcher distributed 40 questionnaires to

the respondents in Magu town who filled and returned the same after a number of reminders. Some filled questionnaires were also sent through email.

## 3.6 The Logit Model

Let  $P_i$  stands for probability of tax evasion and  $1-P_i$  the probability of not evading tax.

$$\ln \left[ \frac{P_i}{(1-P_i)} \right] = L_i = B_0 + B_1x$$

## 3.7 The Model Specification

$$\ln [P_i/(1-P_i)] = \beta_0 + \beta_1Edec + \beta_2Tr + \beta_3Income + \varepsilon$$

Where  $B$ 's are coefficients to be estimated and  $\varepsilon_i$  is the error term.

## 3.8 Variables

### 3.8.1 Dependent variables

The dependent variable is a dummy; it takes 1 if the individual does not evade paying tax and 0 if he/she evades paying tax.

### 3.8.2 Independent variables

#### a) Education (Edec)

It was assumed that tax evasion tends to decrease with increasing level of education. The level of education is measured by years trained.

#### b) Tax rate (Tr)

It was assumed that as tax rate increases tax evasion increases too. It was measured by amount of income tax rate.

#### c) Income

It was assumed that as income increases tax evasion tends to decrease. It was measured by the amount of income of the business person per month.

## 3.9 Estimation Techniques

The study used the logit model where the dependent variable is dichotomous. The regression assumes the value of 1 if an individual is not evading tax and 0 if he/she evades tax. Due to non-linear functional nature of the model, the maximum likelihood method was used to estimate the model using Z statistics. In estimating the model, this study used SPSS Package, excel and Stata Package.

## 4. Empirical Results and Their Interpretation

### 4.1 Descriptive Analysis

The descriptive analysis in this study was concerned with establishing descriptive statistic of variables. The analysis gives an overview of the variables and provides their behavioural patterns. Table 4.1 presents the results of the summary statistics of descriptive analysis. The analysis shows that total number of males was 21 which is 67.74% and females was 10 which was 32.26%, among the respondents 20 people had education which was 64.52% and 11 respondents were not educated that was 35.48%. Also the analysis shows that about 14 respondents were evading tax which was 45.16% and 17 were not evading that was 54.84%. On the other hand mean income of the respondents was Tsh 276954.8/=, minimum income was Tsh 1800/= and maximum income was Tsh 2,400,000/=. The mean tax rate was Tsh 1446671, minimum Tsh 1000, while maximum tax rate was 1.20e+07.

**Table 4.1:** Characteristics of the Variables in Summary.

Variables	Observation	Mean	Std. dev	Min	Max
Tr	31	1446671	.2780847	1000	1.20e+07
Edec	31	.6451613	.4863735	0	1
Taxev	31	.5483871	.5058794	0	1
Income	31	176954.8	438733.4	1800	2,400,000

Source: Author’s analysis.

**Analysis of the Estimated Logit Model**

The reason for the analysis is to verify the empirical validity of the observed characteristics of the variables analysed in the descriptive statistical evaluation.

**Table 4.2:** Results of the Estimated Logit Model.

Taxev	coef	Z	p-value
Income	-.9000113	-1.75	0.084
Edec	-.163124	-0.17	0.066
Tr	9.10e-07	1.76	0.008
-cons	.5243983	0.61	0.545

Source: Author’s analysis

Observation 31 LRch2 (3) 12.36 p- value 0.0062 pseudo R2 0.2895

On the basis of count R2, the goodness of fit of the logit model confirmed the dependent variable is explained by independent variable by 75.5%. The independent variables used in the logit regression includes tax rate (tr), income, and education (edec).

For estimating magnitude of coefficients, marginal effect for variables which are significant were calculated to show how additional unit for each variable result to tax evasion and avoidance. The marginal effects for each independent variable which are significant in all significance level give some detail on the causes of dependent variables, tax evasion and avoidance.

**Table 4.3:** Marginal Effect after Logit [Y= pr (taxev) (predict) =.43473972]

Variable	dy/dx	Std. err	Z	p-value
Tr	2.244e-07	.0000	1.73	0.084
Edec	-.0401835	.23763	-0.17	0.066
Income	-2.77e-06	.0000	-1.93	0.054

Source; Author’s analysis.

**4.2 Tax rate**

The coefficient and marginal effect of tax rate is positive and significant. The study shows that the higher tax rate, increases the likelihood of tax evasion by 2.24. The positive effect of tax rate implies that the higher the tax rate the more the likelihood of tax evasion and avoidance. Higher tax rates tempted people to evade and avoid tax because of the pinch associated with the higher tax rate. This led us to reject the null hypothesis which says that tax rate has no impact on tax evasion and avoidance.

**4.3 Education**

The coefficient and marginal effect of education variable is negative and significant. The study found that the more the education on the part of the tax payers the higher the likelihood of reducing tax evasion and avoidance, which was 4%. The negative effect of education implies that the higher the education on the part of the tax payers the higher the chances of reducing tax evasion and avoidance. This also

leads to the rejection of the null hypothesis that the level of education has no influence on tax evasion.

**5. Conclusions**

**Policy Implications and Recommendations**

**Summary of the findings**

The study focused on the causes of tax evasion and avoidance in Magu district.

**Policy implications**

The study decided to verify the relationship between tax evasion and avoidance with tax rate, income and education. As income increases tax evasion and avoidance decreases. In terms of education, the higher the education on the part of the tax payers the higher the chances of reducing the likelihood of tax evasion and avoidance among the tax payers. In terms of the tax rate, it was found that the higher the rate of tax payment the higher the likelihood of evading and avoiding tax.

**Recommendations**

It was observed that in order to overcome problems of tax evasion and avoidance the following steps should be taken.

- i. Provision of education to the tax payers on the significance of paying tax to the Government.
- ii. Keeping marginal rates of tax low so as encourage tax payers not to evade and avoid tax.

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