Assessment on the Effects of Tax Revenue on Economic Growth in Tanzania

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Abstract
The study conducted to assess if the tax revenue can bring about the growth of the economy in Tanzania, as it has been observed from the World Development Indicators that there is existence of fluctuations of economic growth in Tanzania as the tax revenue increases. Data applied under this study was annual time series data for the period 1997–2017, and the Model used is Ordinary least square method (OLS) of multiple regression which has established the relationship between the dependent and independent variables. The findings of the study have shown that the effects of the tax revenue on economic growth is of positive effects that means tax revenue is statistically significant to explain about the growth of the economy on Tanzania. The study recommends that the government of Tanzania should provide education to the citizen, enhance good policies to improve the tax revenue collection and to keep track of tax administration systems to make sure that there is an increase of tax revenue to ensure the growth of the economy.

Keywords: Economic Growth, Tax Revenue, Economy

1. Introduction

The government has different means of raising its income, such as rent income, government goods and services, investment income, donations, and royalties. The way the government raises and uses its revenue has a considerable impact on the social and economic development of nations. For most countries worldwide, a large percentage of the country's revenue depends on tax revenues collected rather than other sources of income. Based on the current approximations from the International Centre for Tax and Development, the sum of the tax revenues is about more than 80% of the total government income in about half of the countries in the world and above 50% in almost every country. The biggest percentage of income comes from taxes. In the 1990s, tax revenues collected across the world were about 10% of the national income collected by different governments through the tax as a source of revenue, which was sufficient for the government to spend it only on basic functions, including maintenance of orders and applying property rights.

In the case of U.S. tax statistics, the huge changes in taxes show that there have been changes in the growth of the U.S. economy. During that time, the country's economy experienced unpredictable periods, including the Great Depression.

In the case of developing countries like Colombia, tax revenue was increasing through consumption taxes, which led to an increase in the growth of the economy, so this shows that there is a significance to having different forms of tax collection. And income tax became an appreciated or the best source of tax revenue, which contributed a lot to the growth of the country in the 20th Century. In the case of Turkey, there was a study conducted by Roser (2018), and the results showed that most of the higher-income countries have stable tax revenue levels, while in developing countries, tax revenue patterns have not been well understood, but in the case of middle-income countries, tax revenue seems to go up consistently. For example, the country of Turkey had a tax revenue collection of about 13.5% in 2001, and the tax revenue doubled that earned tax revenue. So, in the case of developing countries, the tax revenue collected is low, and its trend is not persistent by a significant margin.

In the case of Tanzania, it has adopted the tax systems and reformed them from time to time, including the colonial taxing system of poll tax (head tax) in the early 20th century and the reforms of the tax system that were done during the introduction of sales tax, the passing of the new income tax legislation, the adjustment of the present tax regulation to review the tax sources and rates, and the elimination of some excise duty to make sure that there is an increase in the growth of the economy through tax revenue collection.

In Tanzania, it has been observed from the data collected by the International Monetary Fund (IMF) that there are fluctuations in the tax revenue rate, making it difficult to determine the impact of tax revenue on the country's economic growth. The following tax revenue statistics from the IMF highlight this trend: In 2010, the economic growth rate was 6.3% with tax revenue at 9.9%. In 2011, the economic growth rate increased to 7.6%, but tax revenue decreased to 9.7%. In 2012, the economic growth rate was 4.5% while tax revenue rose to 10.4%. In 2014, economic growth was 6.7% with tax revenue increasing to 11.3%. However, in 2015, economic growth was 6.1% while tax revenue declined to 10.4%. In 2016, economic growth reached 6.8% and tax revenue rose to 11.39%. In 2017, economic growth stood at 6.7% with tax revenue increasing to 11.8%. In 2018, economic growth decreased to 5.2%, and tax revenue also declined to 11.6%. These statistics indicate that despite fluctuations in tax revenue, the growth of Tanzania's economy remains uncertain. Further investigation is needed to determine the statistical significance of tax revenue in driving the country's economic growth.

1.1. Statement of the Problem

Tax revenue is among the sources of raising revenue in Tanzania, which contributes a larger percentage than other sources of revenue (Non-tax revenue sources). The government's strategy is to raise revenue by making sure that there are good policies for tax impositions in this informal sector and strict rules upon dishonest traders. The government of Tanzania has also applied various ways for tax revenue collection, which include indirect taxation (these taxes are charged on consumer goods and services) and direct tax charges such as income tax, business tax, and corporate tax. Currently, on December 10th, 2018, the President of Tanzanian Dr. John P. Magufuli has introduced "Kitambulisho cha wamachinga" and distributed about 670,000 identities, of which each region has 25,000. Whereby each small entrepreneur who invested the capital below Tsh 4,000,000 is supposed to pay Tsh 20,000 each as tax, this strategy encourages small entrepreneurs to invest as the tax is paid at a considerable rate, so this is another strategy that the government of Tanzania has applied to increase tax revenue collection in Tanzania.

In Tanzania, there is an underperformance of tax revenue collections, which is caused by various factors such as the difficulties in tax impositions in informal sectors, smuggling activities, the existence of dishonest traders who don’t issue receipts on sales, and the unawareness among the citizens to claim electronic receipts when buying goods or services. The study was conducted to assess if the tax revenue can bring about the growth of the economy in Tanzania, as it has been observed from the World Development Indicators that there are fluctuations in economic growth in Tanzania as the tax revenue increases.

Different researchers have conducted studies to investigate the effects of tax revenue on economic growth. Loganathana (2014) found a positive effect of tax on economic growth, suggesting that tax revenue can contribute to the growth of the economy in Tanzania. The study utilized non-linear causality tests to determine long-term cointegration and the direction of the causal relationship between the variables. On the other hand, Kho (2018) revealed a negative relationship between tax revenue and economic growth using the Auto-Regressive Distributed Lag (ARDL) approach. This implies that tax revenue may not stimulate economic growth in Tanzania. The conflicting findings highlight the need for further research and analysis to understand the specific dynamics and factors at play in the Tanzanian context.

Also, other studies conducted at the national level consist of several weaknesses. For instance, the study conducted by Anyanwu (2015) focuses on the effect of tax revenue on economic growth, but they have used the past years to evaluate the effects, whereas this study was based on the current years from 1997 to 2017 to evaluate the effects of tax revenue on economic growth, but this study has covered the Tanzania context as each country is at different levels of economic growth, and therefore the macroeconomic variables have different impacts depending on the economic status of the country.

2. Literature Review

2.1. Theoretical Literature Review

2.1.1. Taxation theory

This theory was developed by Adam Smith (1776), who explained that taxes provide general benefits to the public. So based on that idea, each individual is responsible for contributing tax because, at the end, the benefits are for the entire population. He explained that in order to get enough tax contributions, the government or tax collectors have to take into consideration the following issues, which tend to include the following: The first is that the tax should be charged according to their abilities to pay; the second is that they have to consider a specific amount rather than random; the third is that the tax should be payable at specific times or intervals rather than in a way that is suitable to tax contributors; and the fourth is that it should be collected in a way that is less expensive and cheap to manage. So according to Adam Smith, the tax an individual should bear should be equally proportional to their ability. Therefore, based on Adam Smith's ideas, if the tax collector can base their collection on that, they can be in a position to collect enough tax to favor each individual and foster the growth of the economy and not otherwise. Based on the theory of taxation, it has suggested the ways that can lead to an increase in tax revenue that the tax collector has to make sure that they take into consideration, including the following:

tax should be charged according to their abilities to pay. The second is that they have to consider a specific amount rather than random, and the third is payable at specific times or intervals rather than in a way that is suitable to tax contributors. The fourth one is that it should be collected in a way that is less expensive and cheap to manage; therefore, if the tax collectors consider those, it will lead to the generation of tax revenue and, at the end, the growth of the economy, as one of the biggest sources of revenue is tax revenue.

2.1.2. Benefit Theory

The theory was developed by Lindahl (1960), who explained that the tax levels are determined automatically as the tax contributors pay proportionally according to the benefits they receive from the public services, so the more the public is good, the more the tax contributor will be motivated to pay tax. So the taxpayers who are most benefited by the tax are the ones who will pay more tax. So based on this benefit theory, those who are not in a position to benefit from the public services will be reluctant to pay taxes, which will result in underdevelopment and low economic growth as a large percentage of income in the country depends on tax collection. But those few ones who are in a position to benefit from the public services will pay more tax, but that will contribute in a low percentage towards the growth of the economy compared to the situation that if all they can be in a position to benefit from public services, most of them can be in a position to pay more tax, and hence this can foster more growth of the economy. Based on the theory of benefit, the taxpayers are motivated to pay tax once they receive benefits from the public as a result of the tax paid, so the tax collector has to make sure that the tax collected is invested in public goods for the benefit of all the taxpayers. This will motivate all taxpayers to pay tax, which in turn will lead to an increase in tax revenue and hence the growth of the economy as a whole.

2.2. Empirical Literature Review

The evaluation of the different literatures has shown that different authors have studied and analyzed the relationship between tax revenue and economic growth, and the results have shown a negative impact (. The study conducted in the U.S. by Gale (2015) examined the effects of tax revenue on economic growth in the United States from 1993 to 2013 and found that the rapid economic growth that occurred in that period was due to other non-taxable sources, as well as the tax forms and tax administration system, which were found to be unfriendly to the taxpayer and hence the response of the taxpayer was low. Also, a study by Pempetzogloub (2015) examined the effects of tax revenue on economic growth from 1998 to 2015 and found that the aim of the U.S. government is to increase economic growth through taxation.

Another is the study of Samwick (2016), conducted from 1990 to 2010, which used a vector error correlation model to investigate if the higher tax rates have a relationship with the growth of the economy and found that both the marginal tax rate and the capital gains tax rate have no relationship with the GDP growth rate (economic growth rate) of the country.

A study conducted in the United States by Ngoie (2018) investigated the effects of tax revenue on economic growth in the United States from 1999 to 2014. The study found that corporate taxes are the most harmful to the growth of the economy, and in conclusion, the taxes have a negative correlation with the growth of the economy. Frentz (2014) found that if the tax cuts (reductions on the tax paid on sales, income, and profits) can cause an increase in investments and the expansion of different economic activities, it will result in the economic growth of the country. A study conducted at Durbin by Kho (2018) investigated the relationship between tax revenue and economic growth, both in the long run and in the short run, from 1995 to 2015. The results show that a 1% increase in taxes will reduce the rate of economic growth by 0.33%. Another study carried out by Ojede and Yamarik (2014) investigated the relationship between tax revenue and economic growth both in the long run and in the short run for 48 states in the United States by using the error correction model and found that taxes on personal income have a positive impact on economic growth, while corporate taxes have a negative impact on economic growth.

Nevertheless, the study of Siddhartha and Indraneel (2017) investigated the effect of tax revenue on economic growth from 1994 to 2014. They found that taxation at different categories of the income distribution has unrelated impacts on households motivations or incentives to work, invest, and consume, so through the use of U.S. state-level data and micro-level household tax returns over the last three decades, they have reduced the income inequality among low and medium-income households, which leads to the growth of the economy, while reducing the income inequality through taxation between low and median households tends to reduce economic growth. Bujang, Hakim, and Ahmad (2014) investigated both developing and developed countries, and they conducted the investigations with the use of a sample of 107 developing countries and found out that in the case of developing countries, tax revenue has an impact on the economic growth of the country, but in the case of developed countries, tax revenue has no impact on the economic growth of the country.

Based on the empirical literature cited above, many of the studies focused on the effect of tax revenue on economic growth. They come up with different results; some suggest that there is a positive impact of tax revenue on economic growth, and others suggest that there is a negative impact of tax revenue on economic growth in Tanzania. However, some of the studies have tried to cover that, but still, there is a need to conduct the study again in Tanzania due to the following reasons: First, the existence of dynamic results among the studies; as other studies found the existence of a significant relationship, that means there is a positive relationship between tax revenue and economic growth in Tanzania, while other studies prove the other way around. Second, most of these studies were conducted outside Tanzania, as proposed by Bujang, Hakim, and Ahmad (2014), who propose that the impact of tax revenue on economic growth depends on the status of the economy in which the country is located (that is, for developing countries like Tanzania and developed countries, their economic growth is affected by tax revenue differently, hence the researcher conducted the study in the Tanzania context). And finally, most of these studies used autoregressive distribution lag, two non-linear causality tests, and Granger causality, while this study will use the Ordinary Least squares method. Therefore, this study aimed to assess the effects of tax revenue on the economic growth of Tanzania.

3. Methodology

The research design applied in this study is descriptive and non-experimental. In this research, the researcher has applied the positivist research paradigm as it is applicable in quantitative research. The study has been carried out in Tanzania context using the macroeconomic variables namely economic growth, tax revenue, government spending, household consumption and capital investment. Under this study, the researcher has used the documents produced by the World Bank, TRA (Tanzania Revenue Authority), Global Economy, and Tanzania Data websites, which were already produced by the TRA and Economic Statistics in the previous financial years. Using descriptive and inferential statistics, this data was quantified and categorized. STATA Version 13 was used to define, sort, and sift through the acquired data before analyzing it. In data analysis, measures of central tendency were utilized in conjunction with significance tests.

4. Results

4.1. Regression Analysis

The regression analysis was performed after making the variables stationary, to establish whether in the first place there was a linear connection or not between each of the independent variables (tax revenue, capital investment, household consumption and capital investment) and one dependent variable (Gross Domestic Product (GDP)). The regression results of these investigations show that only one independent variable (tax revenue) out of four independent variables is statistically significant in influencing the dependent variable (GDP). The results are presented below:

Table 1: Regression Output

Variables	Coefficients	Standard Error	t - Statistic	P > l t l	R^2	Prob > F - Statistic	F - Statistic (4, 16)
Tax Revenue	0.000828	0.0001412	5.86	0.000	0.7224	0.0008	9.11
Government Spending	0.0214043	0.064661	0.33	0.746			
Capital Investment	-0.093259	0.0448926	-0.21	0.838			
Household Consumption	0.041705	0.0750552	0.63	0.540			

The results of R-square are 72.24%, which is significant to explain about our model. This means variations in economic growth can be influenced by tax revenue, government spending, capital investment, and household consumption. Therefore, this means the rest, which is 27.76%, can be explained by other variables. This means tax revenue, government spending, capital investment, and household consumption can influence economic growth by 72.24%, so the model is useful for predictions. Therefore, strategic policies should be developed to ensure the growth of the economy. The following is the equation that validates relationships and predictions among the dependent and independent variables and is therefore jointly significant.

Based on the results, the coefficient of tax revenue is 0.000828, which means there is a positive relationship between tax revenue and economic growth. That is, one unit increase in tax revenue will lead to an increase in economic growth by 0.000828, and a one-unit decrease in tax revenue will lead to a decrease in economic growth. Also, the P-value of the tax revenue is 0.000, which shows that the tax revenue is statistically significant to explain the dependent variable, economic growth in Tanzania. Other variables, such as government spending, capital investment, and household consumption, were statistically insignificant in influencing GDP during the period under consideration.

In order to assess whether tax revenue, government spending, capital investment, and household consumption can or cannot jointly influence the economic growth of Tanzania, the researcher examined the F statistics and P-value results. The findings show that the F statistic is 9.11 with a P-value of 0.0008 since the P-value is less than 5%. Significantly, the researcher rejects the null hypothesis and accepts the alternative hypothesis that both tax revenue, government spending, capital investment, and household consumption were jointly significant in influencing the economic growth (GDP) of Tanzania.

4.2. Discussion of Findings

Based on the findings from the regression output, it reveals that the effects of tax revenue on economic growth in the Tanzanian context are positive. As the coefficient of tax revenue is positive, an increase in one unit of tax revenue will lead to an increase in economic growth, and a decrease in one unit of tax revenue will lead to a decrease in economic growth.

However, the study is relevant to the findings of other researchers, like the study conducted by Loganathana (2014), which explained that there is a positive effect of taxes on economic growth. The approach adopted is that of non-linear causality tests to determine the long-term cointegration and direction of causal relationship between these variables, which means tax revenue can contribute to the growth of the economy in Tanzania, so this confirms the findings of this study.

Another study that conforms to the findings of this study is that of Frentz (2014), who did investigations on the tax policy changes concerning the tax cuts and found that tax cuts can result in an increase in investment and expansion of activities, which results in the growth of the country's economy, which also tends to confirm the findings of the study. Also, another investigation done by Gashi, Asllani, and Boqolli (2018) investigated the issue of whether reductions in tax rates on consumption of basic products and increases in tax rates on luxury products have a positive effect on the growth of the economy, which conforms to the findings of this study.

Also, there are other studies conducted that are not confirming the findings of this study, including the study conducted by Stoilova (2017), who investigated and found that the tax revenue generated from the income tax is charged from the income generated by the entities or individuals and the economic growth, which is a source of revenue to the government, hence the reduction in the level of economic growth. So, based on this, there is a negative relationship between tax revenue and economic growth, which is not confirmed by the findings of this study. In another study conducted by Asllani, Statovci (2018), and Gasteratos et al. (2016), they conducted investigations on corporate income taxes and found that they had a negative impact on the economic growth of the country, which is not consistent with the findings of this study.

Therefore, the above empirical evidence shows that the investigations that conform to the findings of the study support the conclusion that tax revenue has a positive impact on the growth of the economy, but there are also other investigations that show that tax revenue has negative effects on economic growth. So, based on the findings of the study, the government has to make sure that it structures the new strategies that will influence the increase in tax revenue collection so that it fosters the growth of the economy. In December 2018, the President of Tanzania introduced the strategy of "Kitambulisho cha wamachinga." This is a good strategy that will lead to an increase in tax revenue collected in our country, hence the strategy of charging tax according to the earnings of the people. Hence, the government has to develop new strategies that will foster the growth of the economy.

5. Conclusion and Recommendations

The findings of the study have clearly shown that the effects of tax revenue on economic growth are positive, meaning that one unit increase in tax revenue will lead to an increase in economic growth, and if tax revenue decreases by one unit, economic growth will also decrease. This study shows that the variables government spending, household consumption, and capital investment are statistically insignificant to explain the growth of the economy, as also revealed in the regression output, where their P-values are above the 5% level of significance. This result suggested that the fall in economic growth is due to the fall in tax revenue, which has been caused by the structure of the tax collection system, the approach, and the instruments for tax collection. All this has discouraged taxpayers from paying taxes, which leads to a reduction in tax revenue that impacts the growth of the economy negatively. Therefore, the improvement of the tax revenue through the improvement of the tax collection means and the structure of the tax collection will lead to an increase in tax revenue and hence the growth of the economy. Based on the findings, the researcher recommends the following: The government of Tanzania should provide education to the citizens so that they know the importance of paying tax, which could result in an increase in the tax revenue collected and hence the growth of the economy. The government must enhance good policies to improve tax revenue collection and ensure the growth of the economy. The government should establish supportive incentives for the taxpayers according to their environment of working that would encourage them to pay tax so as to increase the revenue collected and hence the growth of the economy. The government must make sure that it keeps track of tax administration systems to ensure the growth of the economy. The data used for this study was time series data, which cannot tell us what is happening now (the current impact of tax revenue on economic growth) because the data used to forecast are not up to the current year of 2019, so another researcher may use panel data and cross-sectional data to carry out the study.

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