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IMPLICATION OF FISCAL POLICY ON ECONOMIC GROWTH OF RWANDA

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Abstract:

Fiscal policy has been very vital to the formulation of government plans in Rwanda, that is to say; the level of government spending and taxes are to large extent determined by objectives and plans of the government. In effect, understanding how government spending and budget deficit affect the economy can help us to understand how redirect fiscal policies to advance economic growth of Rwanda and growth. The current study provides an empirical analysis of the Analysis of implication of fiscal policy on economic growth in Rwanda. The findings indicated that government expenditure (GE) has a positive relationship with Economics growth, and also Tax revenue (TR) has a positive effect on economic growth in Rwanda. The results revealed also that External debt (EXD) has a positive effect on economic growth (GDP) in Rwanda. The value of R-Squared 0.972 indicated that all independent variables (GE, EXD, and TR) cause variation in Dependent variable (GDP) at the level of 97.2%. The model was valid as it was confirmed by normality test and multi-collinearity test. All the above facts allowed the researchers to confirm that GE, EXD and TR have a statistical significance on GDP in Rwanda.

Key Words: GE, EXD, TR, GDP

Introduction:

Fiscal policy is one of the most important tools of economic management in achieving economic development and eliminating the problems that impede economic stability. In addition to the distributional and specialized effects of fiscal policy instruments, there are stable effects of the role of government spending and taxes on the overall demand and hence macroeconomic variables (1).In Rwanda, the fiscal policy is considered one of the most important economic policies affecting economic growth, where it can play an important role in achieving the various objectives of the national economy, especially in terms of raising the rate of economic growth through its various tools, which are easily controlled by the government (2).

Economic growth considers the main factor officially adopted in measuring the progress of countries. Most developed countries have high economic growth rates, unlike those of developing countries with very low growth rates, with the exception of some oil-producing countries that control their rate of growth. The importance of economic growth stems from its positive effects on the national economy and society, which giving a strong impetus to new investments, resulting in greater employment and purchasing power for the community (3).Therefore, it is also necessary to realize that the issue of the mutual interaction of fiscal policy and economic growth of Rwanda belongs among important topics. Main reasons do not derive only from the fact that fiscal policy has the potential to influence the long-term economic growth of Rwanda, but they also lie in the further mentioned facts. Current, modern and globalized society is characteristic by the necessity of their distribution processes existence, which is usually represented by the level of government spending.

The composition of government spending and taxes in Rwanda is broadening, that is, the selection and combination of the fiscal policy variables involves identification and measurement of their impact on the economy and their relationship with the overall objectives of government. The individual impact of the fiscal variables has not been identical, and one task for policy makers has been to ascertain the impact of each of the variable and to direct them, so that they collectively serve the purpose that they are intended for.

Objectives of the Study:

The general objective of this study was to analyze the impacts of fiscal policy on economic growth in Rwanda. The specific objectives underlie this research are as follows:

- To analyze how the government expenditure affect economic growth in Rwanda.
- To assess the effect of tax revenue on the economic growth in Rwanda.
- To find out the impact of external debt on the economic growth in Rwanda.

Effect of Government Expenditure on Economic Growth:

The effects of government consumption spending, public social spending, and public investment on economic growth in Nigeria shows that when public social spending increases, economic growth experiences negative and significant impact, there is no significant effect between government consumption spending and

public investment have with economic growth (7). The assessment on the effect of expenditure on various sector of the economy separately can promote growth as seen study which tested the importance of various categories of public expenditure, the functional structure, and growth in the gross domestic product (GDP) using data for 10 Central and Eastern European countries from 1995–2015, found that education and health care expenditures impact positively on the economy, but other sector expenditures such as general public services defense, social welfare, and economic affairs impact negatively on the economy (8).

Impact of Tax Revenue on the Growth of the Economy:

The tax revenue is the primary revenues in Kenya and it represents payment by communities as a whole for public goods and services. In the years of this study the Kenya government has committed itself to provision of additional public goods and services such as free primary and secondary education, free health care and physical infrastructures. The tax revenue raised by the government depends to a large extent on the state of the economy; therefore, the impact of tax revenue on economic growth is an issue of great importance (12).Generally, the level of growth of the economy is expected to positively influence tax revenue performance and a large non-agricultural sector, urbanization and high per capita income levels are all expected to positively influence tax revenue mobilization (13).The per capita GDP, the level of trade openness and public expenditure on education. Further, they showed that these positive effects can however, be undermined by macroeconomic instability and disparities in income distribution (14).

Effect of External Debt on the Economic Growth:

External debt is the debt owed to external creditors. These are World Bank (WB), African Growth Bank(ADB),and International Monetary Fund(IMF).Others are countries like example China, USA, Japan, Italy, Germany as well as Commercial creditors essentially private institutions, for example Standard Bank United Kingdom. In addition to these factors, drought condition shave also contributed to the external debt burden, (Fu et al, 2003). External debt refers to credit owed to foreign lenders. The service of external debt may negatively affect growth by discouraging private investment. The larger debt service can inhibit growth by squeezing public resources available for investment in infrastructure and human capital. Also, external debt has string attached and interest payment on the debt can reduce public saving by widening a countries' budget deficit. If interest rates rise the credit available for private investment is crowded out, thereby depressing economic development (16).

Determinants of Economic Growth:

The author analyzed the influence of trade openness on growth for 120 countries between 1970 and 1997. He used several variables to measure openness like for example volume of exports, volume of imports, the sum exports and import and the volume of trade with developed countries. He also used trade policy variables for measuring restriction or openness of trade. The result concluded that for developed and developing states the indicators that measure the volume of trade have a positive effect on growth. An interesting result in our opinion is that trade restrictions have the effect of accelerating growth of GDP for developing countries (19). The correlation between trade openness and financial openness and economic growth confirmed that trade openness and financial openness (FDI) have a significant impact on growth and also that institutional openness is affecting indirectly the economy via trade and FDI (20). The role of FDI on economic growth for a large sample of countries that are both developing and developed. The results conclude that FDI directly and positively influences growth. The findings of other researchers in the beginning of the 2000s demonstrated that FDI may have a positive link between it and economic growth (Lensink and Morrissey, 2006). Research **Methodology:**

The nature of the research is analytical research it seeks to explain the relationship between fiscal policy and economic growth in Rwanda. The type of the investigation is the correlation, as it tried to observe whether the fiscal policy has a significant impact on it. This was achieved by showing the existence, direction, strength and greater significance of the relation. This study used secondary data on the study variables for the period 1995 to 2020. The data were collected from World Bank. The researcher entered data into statistical package SPSS version 22.0 to derive statistic for the data. The researcher used documentation to analyze the fiscal policy and economic growth in Rwanda in order to get secondary data that served the achievement of study objectives. The researchers used time series data obtained from World Bank annual Reports during the period of the study. This was done face to face between the interviewer and the respondents. It was conducted for the purpose of obtaining the information related to the fiscal policy and economic growth in Rwanda.

An interview guide was addressed to Head of Macroeconomics department in MINECOFIN. The econometric methods were used in the estimation of the coefficients of the explanatory variables in order to test the influence of the independent variables on the dependent variable. As the dependent variable (Economic Growth) has many determinants, it has been necessary to add some controls variables. The new model specification has been in the general form as: GDP = f (GE, EXD, TR). This function has been converted into the econometric model; it was derived as: $GDP = \beta0 + \beta1GE + \beta2EXD + \beta3TR + \mu t$ where, GDP = Gross Domestic Product; GE = Government Expenditure; EXD = External Debt; TR = Tax revenue; μ= error tem and

β= coefficients. β0: is the constant intercept which shows the level of GDP, when the explanatory variables GE, EXD and T are zero. Log GDP= β0+β1 logGE+β2 logEXD+β3 logT+μt.

Findings of the Study:

The multivariate regression was used during this study to determine the relationship between the dependent variable (Economic growth) and independent variables (Government expenditure, External debt and Tax revenue). The multiple regression models were as follows: Y = β0+β1×1+β2×2+β3×3+μt. Whereby, Y was Economic growth, β0 was a constant, β1-β3 were coefficients of determination, ×1 was Government expenditure, ×2 was External debt, ×3 was Tax revenue e and μt was Error term. A model summary has been automatically created when running a regression modeling or a classification modeling. The model summary displays the name of the model, the model type, and the model formula. The following part describes the model summary of the study where the coefficient of determination (R Square) has been pointed out. This indicates the level at which independent variables (Government expenditures, External debt and Tax revenue) cause variation in dependent variable (Gross Domestic Product).

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.986[a]	.972	.968	572100350.26476790000000
a. Predictors: (Constant), Tax revenue (% of GDP), External debt, total (current US$), Gross national expenditure (constant LCU)				

Source: Computed by the author using SPSS 22.0, November, 2021

The R-Squared was used to show the variation of the dependent variable that could be explained by the independent variables. The R-Squared is 0.972 implying that 97.2% of the Economic Growth in Rwanda could be explained by independent independents variables: Tax revenue (% of GDP), External debt, total (current US$), Gross national expenditure (constant LCU) b and the dependent variable is Gross domestic Product.

Table 2: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	249834022718558440000.000	3	83278007572852820000.000	254.440	.000[b]
	Residual	7200573837007541200.000	22	327298810773070020.000		
	Total	257034596555566000000.000	25			
a. Dependent Variable: GDP (current US$)						
b. Predictors: (Constant), Tax revenue (% of GDP), External debt, total (current US$), Gross national expenditure (constant LCU)						

Source: Computed by the author using SPSS 22.0, November, 2021

In determining whether the model was good fit for data, the study adopted the use of analysis of variance. The value of the F-Critical (2.26) was less than the F-calculated (254.440) and the P-Value (0.000) was below the significant level, implying that the model could be used in predicting the contribution of Government Expenditure, External debt and Tax revenue (independent variables) on Economic growth (dependent variable) in Rwanda.

Table 3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.521	0.293		3.307	.031
	External debt, total (current US$)	.099	.173	054	.572	.003
	Gross national expenditure (constant LCU)	.001	.000	.835	4.371	.000
	Tax revenue (% of GDP)	.064	.096	.206	4.551	.005
a. Dependent Variable: GDP (current US$)						

Source: Computed by the author using SPSS 22.0, November, 2021

From the data in table 3, the established regression equation was: GDP = 0.521 + 0.099 EXD + 0.001GE + 0.064TR. As presented in the above table, External debt has a significant positive influence on Economic growth as indicated by regression coefficient of 0.099 and P-value of 0.003. It is also clear that Gross national expenditure has a significant positive influence on economic growth as indicated by regression coefficient of 0.01 and P-value of 0.000. Tax revenue has a significant positive influence on economic growth as indicated by regression coefficient of 0.064 and P-value of 0.005.As matter of the fact, it is very true to confirm that all independent variables have an impact on economic growth in Rwanda.

Conclusion:

The outcome showed that these variables had statistical significance effect on economic growth. This is in contrast with some studies done before. The policy lesson that can be learnt from the findings is that a continued sensible use of government recurrent and growth expenditure as a policy tool can speed up economic

growth and development, additionally, if the fiscal policy tool is undertaken there should be an associate monetary policy to take care of the spillover of the fiscal policy like inflation.

Recommendations:

The study revealed that public expenditure had a significant effect on economic growth in Rwanda. There is need for government to improve tax administration as means for improving the working environment. Expenditure on productive activity can trigger economic growth therefore much emphasis needs to focus on generating performance. There is need for government policy ensuring quality and sustained growth that can potentially improve the pace of Rwanda's economic advancement. There is need for enhancing the government expenditure on improving the informal sector for generating economic growth in Rwanda. On the second objective tax revenue contributes to improved economic growth. Therefore, enterprising of the informal sector is needed for increasing the tax bases. There is need for increasing revenue generation preferably through encouraging investments and supporting the creation of small business that can yield capital in order to generate more tax revenue for economic growth. There is need for enhancing the proper revenue usage of the taxes in the country for infrastructure growth in order to generate the revenue for the country. The government of Rwanda has to minimize external debt as their repayments have a negative impact on economic growth of the country.

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