THE EFFECTS OF PUBLIC DEBT ON ECONOMIC GROWTH IN KENYA

George Gicheru[1]

[1]Department of Economics, Accounting and Finance, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

Tabitha Nasieku[2]

[2]Department of Economics, Accounting and Finance, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

ABSTRACT

Governments need resources for public expenditure. These resources are mainly obtained from taxes and borrowing both from domestic market and abroad. When external public debt is spent on productive investment activities, it creates macroeconomic stability in the country which results to capital inflow that has positive effect on domestic savings, investment and economic growth. Debt or loan whether from external or internal sources can be classified as either productive or unproductive (dead weight) debt depending on its uses. The general objective of this study was to evaluate the effect of public debt on economic growth in Kenya. This study used secondary data from Kenya National Bureau of Statistics and Central Bank of Kenya spanning from 1996 to 2015. The variables of our study are GDP, external debt, internal debt and productive debt. A regression model was used to illustrate the relationship between dependent and independent variables. The main findings of our study was that there was a negative relationship between external public debt and economic growth, a significant positive relationship between internal public debt and economic growth and a positive relationship between productive debt and economic growth in Kenya between 1996 and 2015. Further studies should focus on an investigation on the level at which Kenya can comfortably sustain its debts in order to make an appropriate decision on whether to ask for debt amnesty on the current debt or not. Future research on the effect of public debt on private investments should also be done. This would offer information to policy makers on whether it would be appropriate to re-schedule debt in order to minimize the amount spent on servicing the debt and use the saving on domestic investment.

KEY WORDS: Public Debt, Economic Growth, External debt, Internal debt, Productive debt.

1. INTRODUCTION

Governments need resources for public expenditure. These resources are mainly obtained from taxes and borrowing both from domestic market and abroad. Governments borrow funds to fulfil the lack of "saving investment gap" especially with developing countries (Chenery 1996). Borrowing also helps to fill the budget gap or balance of payment deficit gap due to low investment. Gohar et al (2012) recommends that countries facing current account deficit should borrow in order to boost their income and investment. By borrowing, a nation is able to equalize income and expenditures over time and improve standards of living of its citizens earlier than

would be attainable and as such, investments in productive infrastructural activities as well as in good quality institutions would enable a country to repay its debts in time.

When external public debt is spent on productive investment activities, it creates macroeconomic stability in the country which results to capital inflow that has positive effect on domestic savings, investment and economic growth (Burnside, 2000). When used for growth related expenditures, external debt accelerates the pace of economic growth by providing foreign capital for industrial development, managerial know-how, technology, technical expertise as well as accessibility to foreign markets for mobilization of human and material resources (Reihart et al., 2012). In addition, foreign savings complement domestic savings to cater for investment demand (Eaton, 1990). Kenya sources for external funds mostly from World Bank and IMF while domestic borrowing is mainly through instruments such as bonds, treasury bills, and borrowing from commercial banks and overdraft from Central Bank (Makau, 2008).

Debt or loan whether from external or internal sources can be classified as either productive or unproductive (dead weight) debt depending on its uses. When a loan is obtained to enable a country to acquire assets, then the debt is said to be productive. Money borrowed for the sake of acquiring factories, electricity, refineries etc. falls under productive debt while debt undertaken to finance war and expenses on current expenditures are said to be unproductive or dead weight debts. Whenever a country obtains a foreign loan, it means that the country can import from abroad goods and services to the value of the loan without at the same time having to export anything in exchange. To repay for capital and interest, the same country have to get the burden of exporting goods and services without receiving any imports in exchange for the same. However, the two types of debt require servicing to cover for interest and principal payment. Therefore, debt financed investment needs to be productive and well managed to earn a rate of return higher than the cost of debt servicing (Ajayi & Oke, 2012).

Kenya is perceived as the Eastern and central Africa's hub for Financial, Communication and Transportation services (IMF-World Economic Outlook (WEO) 2016). The positive outlook of Kenya's economy is predicated on good agricultural performance, tourism, supportive monetary policy, low oil prices that stimulate consumption as well as infrastructure investments as has been seen from the ongoing building of standard gauge railway (expected to cost $3.6 billion) and energy projects (expected to boost installed power-generation capacity by 5,000 megawatts by 2017), (World Bank 2016).

The Government of Kenya's Public debt has been on a rapid increase owing to infrastructure-related borrowing. The gross public debt reached 52.8 percent of GDP in 2015 up from 44.2 percent in 2014 and 39.8 percent in 2013 while in PV terms public debt-to-GDP ratio stood at 49 percent in 2015-2016 financial year (IMF 2016).The increase was contributed by the issuance of $2.75 billion sovereign bond in June and December 2015, and the initial disbursement of the SGR-related loan from China. The overall public debt is projected to rise to 56 percent of GDP in 2015-2016 financial years owing to frontloading of subsequent disbursements for the SGR (IMF 2015).

2. OBJECTIVES OF THE STUDY

2.1 General Objective:-

The general objective of this study was to evaluate the effect of public debt on economic growth in Kenya.

2.2 Specific Objectives:-

The study was guided by the following objectives

   i.   To find out the effect of external public debt on economic growth in Kenya.

   ii.   To establish the effect of internal public debt on economic growth in Kenya.

   iii.   To assess the effect of productive public debt on economic growth in Kenya.

3. METHODOLOGY

3.1 Data:-

This study uses secondary data from Kenya National Bureau of Statistics and Central Bank of Kenya spanning from 1996 to 2015. The time series of the data is on a yearly basis. The variables of our study are GDP, external debt, internal debt and productive debt. The real Gross Domestic Product (GDP) is used as the proxy for economic growth in Kenya and the rate of economic growth is represented by using the constant value of Gross Domestic Product (GDP) measured in Kenyan shillings.

Regression Model:-

The study model used in the study is shown below:

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

Where,

Y=Economic Growth (Annual GDP), x_1 =External Debt (Annual amount of external debt), x_2 = Internal Debt (Annual amount of internal debt), x_3= Productive debt (Annual amount of productive debt), ε =error term β_0-is the Intercept (Constant term) while β_1, β_2 and β_3 are regression coefficients for our model.

4. RESULTS AND DISCUSSION
4.1 Summary statistics:-

Table 1: Descriptive Statistics

	GDP Growth Rate	External Debt	Internal Debt	Productive Debt
Mean	29.184	555.370	493.470	239.452
Std. Dev.	17.853	290.595	388.477	248.384
Minimum	12.05	307.70	120.40	9.90
Maximum	63.39	1423.20	1420.40	816.21
Kurtosis	-0.8986	3.5143	0.6599	0.3844
Skewness	0.7036	1.9315	1.288	1.1845

Table 1 above indicates that Kenya has a mean GDP growth of 29.184 billion and a standard deviation of 17.853 over a period of 20 years from 1996 to 2015. GDP growth rate had a maximum value of 63.39 and a lowest value of 12.05. External debt over the same period had a mean of 555.370 with a standard deviation of 290.595. This variable had a maximum of 1423.20 and a minimum of 307.70 billion. Out of 20 observations, internal debt had a mean of 493.470 billion with a standard deviation of 388.477. The variable had a maximum of 1420.40 and a minimum of 120.40billion. Productive debt had a mean of 239.452 billion with a standard deviation of 248.384. It had a maximum value of 816.21 and a minimum value of 9.90 billion out of the 20 observations. This implies that for the period under analysis, Kenya's average uptake of debt had been very high while at the same time the average economic growth was very minimal given that the country's aim is to achieve its Vision 2030 objective of an annual rate of 10 percent. Similarly average productive debt for the period under investigation was also quite low compared with the total public debt which gave an indication that much of the resources acquired from both external and internal debts were used on unproductive/recurrent expenditures.

Table 2: Correlation Matrix

		gdp	Extdebt	intdebt	pdctdebt
GDP	Pearson Correlation	1	.893**	.961**	.962**
	Sig. (2-tailed)		.000	.000	.000
	N	20	20	20	20
External debt	Pearson Correlation	.893**	1	.971**	.942**
	Sig. (2-tailed)	.000		.000	.000
	N	20	20	20	20
Internal debt	Pearson Correlation	.961**	.971**	1	.979**
	Sig. (2-tailed)	.000	.000		.000
	N	20	20	20	20
Productive debt	Pearson Correlation	.962**	.942**	.979**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	20	20	20	20

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

Correlation analysis was carried out to examine the presence of multicollinearity and strength of the relationship between variables. Table 2 above shows the results of Multicollinearity test. We tested for multicollinearity using the Correlation Matrix which shows the relationship between the variables. The study findings showed positive significant correlation between GDP and external debt of 0.893 at the 0.01 (2 tailed) significance level. This implies that a unit change in external debt will lead to 89.3% change in GDP. Secondly, there wasa positive significant relationship between internal public debt and GDP of 0.961 at the 0.01 (2-tailed) significance level which implies that a unit increase in internal public debt leads to an increase in GDP by 96.1 %. The correlation matrix in table 2 above shows that there was positive relationship between GDP and productive public debt of about 0.962 at the 0.01 (2 tailed) significance level. A unit change in productive public debt will therefore lead to an increase in GDP by 96.2% which is a strong positive correlation between the two variables. This implies that an increase in productive debt will enhance economic growth in Kenya.

Table 3: Regression Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.949	3.129		5.416	.000
	External debt	-.039	.014	-.629	-2.848	.012
	Internal debt	.055	.017	1.191	3.239	.005
	Productive debt	.028	.019	.388	1.476	.159

a. Dependent Variable: gdp

Using the results of the regression coefficients, the link between Economic Growth and public debt can then be described in linear form as:-

$$GDP = 16.949 - 0.039x_1 + 0.055x_2 + 0.028x_3 + \varepsilon$$

From the regression model obtained above, the Kenyan GDP will be at 16.949 holding all other variables in our study constant. A unit change in external public debt holding the other factors constant will change the economic growth by -0.039; a unit change in internal public debt holding the other variables constant will change economic growth by 0.055 while a unit change in productive public debt will change the Kenyan economic growth by 0.028 holding all other variables constant. This implied that internal public debt and productive public debt have a positive relationship with economic growth while external public debt has a negative relationship with economic growth.

Table 4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.978[a]	.956	.948	4.05924	1.186

a. Predictors: (Constant), External debt, internal debt, productive debt
b. Dependent Variable: gdp

Overall, 95.6% of GDP is explained by our independent variables. The remaining 4.4% is explained by variables that were not part of our study.

5. CONCLUSION

The main findings of our study was that there was a negative relationship between external public debt and economic growth, a significant positive relationship between internal public debt and economic growth and a positive relationship between productive debt and economic growth in Kenya between 1996 and 2015. The study recommends that the government should evaluate its debt policy by examining its credit rating, establishing transparency in loan cycle and providing a policy framework that will credibly create an environment that will encourage investors' confidence as well as encouraging domestic savings. Finally, further studies should do an investigation on the level at which Kenya can comfortably sustain its debts in order to make an appropriate decision on whether to ask for debt forgiveness on the current debt or not. Secondly, researchers can also look into the effect of public debt on private investments. This would offer information to policy makers on whether it would be appropriate to re-schedule debt in order to minimize the amount spent on servicing the debt and use the saving on domestic investment.

REFERENCES

1. Ajayi, L. B.and Oke, M. O., (2012). Effect of External Debt on Economic Growth and Development of Nigeria: International Journal of Business and Social Science, Vol. 3. No. 12.
2. Eaton, J. (1990). "Debt Relief and the International Enforcement of Loan Contracts. "Journal of Economic Perspectives": 43-46.
3. Gohar M., Bhutto N. A. and Butt F., The Impact of External Debt Servicing on the growth of Low-Income Countries, Sukkur Institute of Business Administration, Proceedings of 2nd International Conference on Business Management (ISBN: 978-969-9368-06-6), (2012).
4. Available at: http://www.umt.edu.pk/icobm2012/pdf/2C-85P.pdf accessed on 15.06.2016
5. Makau, J.K. (2008). External Public Debt Servicing and Economic Growth in Kenya: An
6. Empirical Analysis. Unpublished MBA Project, University of Nairobi.
7. Reinhart, C. M. and K. S. Rogoff (2010), "Growth in a Time of Debt", NBER Working Paper No. 15639.