External Debts and Economic Growth in Tanzania

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ABSTRACT

This study examines the relationship between external debts and economic growth in Tanzania using time series data from (1970-2015). The ordinary least squares multiple regression analysis was conducted and the results revealed a significant positive relationship between external debt and economic growth. The Granger causality test was also carried out and the results provided evidence of causality between external debts and economic growth in Tanzania. Furthermore, results from Johansen Co-integration test also provide evidence of existence of long run association/co-integration between external debt and economic growth. So, this study provides evidence that may help to reach a conclusion that external debts have aided to stimulate economic growth in Tanzania. However, caution must be taken to keep external debts at an optimal level to avoid debt overhang which can have detrimental effects on the economy.

Keywords: External debt, economic growth.

1. INTRODUCTION

1.0 Background of the Research Problem

One of the challenges that face developing countries worldwide has been achieving sustainable economic growth. These countries have been working relentlessly towards achieving this goal but the fiscal deficit problem has been hindering these efforts for years. So developing countries have been taking measures to curb fiscal deficit including boosting revenue collections, cutting unproductive expenditures but the problem still exists forcing them to resort into external debts (Pattillo et al., 2011). External debt as a mechanism to finance fiscal deficit has caused developing countries to sink deeper into more fiscal problems especially in servicing these debts hence increasing the burden to these growing economies (Kinnavong, 2016).

Siddique et al. (2015) depict that external debts help developing countries facing fiscal deficit and shortage of foreign currency to achieve their economic goals, however for external debt to either be a relief or a burden to the country depends heavily on how these debts are utilized. External debts used in productive activities i.e. revenue generating increase repayment capability hence providing a relief to the borrower as opposed to debts utilized in unproductive activities.

The external debt phenomenon drew much attention during 1970s, and 1980s, due to the famous "debt crisis". During this era the global oil business generated a lot of profits for

OPEC countries due to the increase in oil prices. These profits and savings were used to provide debts to both developing and developed countries. These debts were intended to help poor countries boost economic growth; however most of the debts were not properly utilized for productive issues. The disaster hit when eventually oil prices started to deteriorate which had repercussions on oil revenue the aftermath of which left heavily indebted countries unable to repay the debts.

Empirical studies have generated contrasting findings about the subject, some studies such as (Shahzad et al., 2014) and (Ahmed et al., 2013) empirically established that there is a significant negative relationship between external debt and economic growth. These findings tend to be different in comparison to those of the studies by (Daud et al., 2013); (Kasidi & Saidi, 2013) that both discovered a positive relationship between external debt and economic growths of the respective countries. So this study intends to empirically investigate whether external debts provide a relief through stimulating economic growth or increase the burden to Tanzania.

1.1 Research Objectives
The main objective of this study is to evaluate whether external provide a relief or burden the Tanzanian economy. The specific objectives are as follows;
  i. To evaluate relationship between external debt components and economic growth
 ii. To examine the causality between external debt and economic growth.
iii. To assess whether there is long run association between external debt and economic growth.

1.2 Significance of the Study
Tanzania has been borrowing externally for the past four (4) decades in order to finance fiscal deficit. Over the years, Tanzanian economy experienced some serious rise in the levels of external debts that caused it to be part of the Debt Relief under Highly Indebted Poor Countries (HIPC) which is a World Bank-IMF joint programme established in 1996 to provide debt relief to these countries. Due to the seriousness of the external debt matter and the fact that Tanzania is considered heavily indebted this study provides evidence to policy makers whether these debts have stimulated economic growth or decelerate it. This helps policy makers to take corrective actions to ensure that external debts are prudently utilized towards productive activities so as to repay existing debts and avoid the debt overhang problem.

1.3 Overview of External Debts in Tanzania
Tanzania has traditionally relied on official bilateral and multilateral donors for financing its development projects and balance of payments requirements. In the period between 1975and 1985, an array of economic and natural disasters both foreign and domestic hit Tanzania which resulted into serious budget and balance of payments deficits. These include the infamous Tanzania-Uganda war and the oil crisis.

This forced Tanzania to borrow from domestic and foreign sources to overcome budget deficit problem (National Debt Strategy, 1998). It was observed that in the period between 1986 and 1997, external debt rose from US$ 4.9 billion to US$ 7.9 billion, which was a drastic increase. At the same time, debt service dropped from US$ 0.3

billion in 1986 to US$ 0.12 billion in 1990. The trend of external debts in Tanzania from 1970 to 2015 is presented in figure 1 below;

Figure 1: Trend of External Debts Stocks (USD Billion) Public and Publicly Guaranteed (1970-2015)
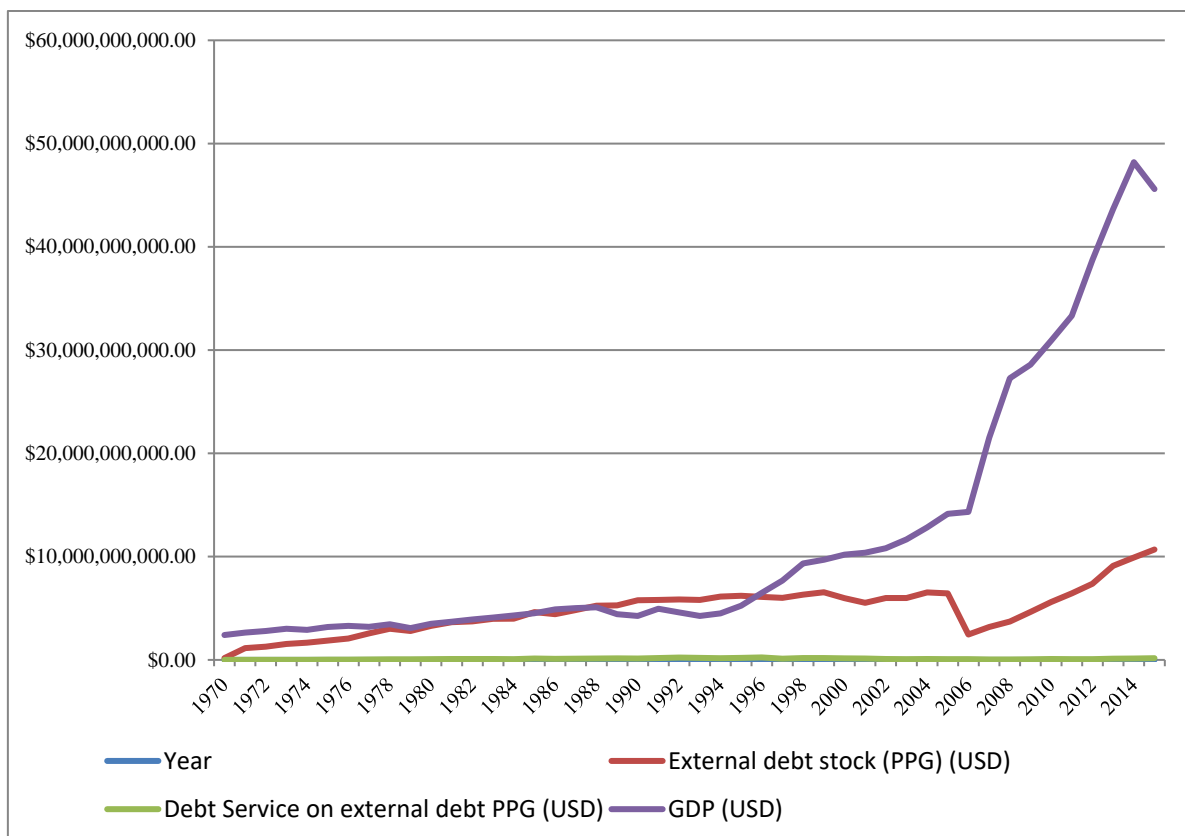
Source: World Bank country statistics (2016)

The statistics presented in figure 1 above show how external debts have been changing over the years from 1970 to 2015. In 1970, external debts amounted to US$ 0.17 billion, these continued to grow continuously to US$ 3.3 billion in 1980 as a result of severe economic problems that faced Tanzania during this era. External debts continued to grow up to US$ 5.8 billion in 1990 and then further to US$ 6.2 billion in 1995. In the next two (2) years the amount of external debts dropped slightly until they rose again to US$ 6.3 billion and US$ 6.5 billion in 1998 and 1999 respectively. From this point external debts fluctuated upwards and downwards over the years until they dropped significantly to US$ 2.4 billion in 2006. Afterwards external debts have been increasing continuously to US$ 10.6 billion.

Tanzania is part of the Debt Relief under Heavily Indebted Poor Countries (HIPC) that is a World Bank-IMF joint programme to provide external debt relief to about 40 developing countries most of which are Sub-Saharan. In 2001, IMF and World Bank's International Development Association provided a debt service relief amounting to

approximately US dollars 3 billion after the country reached the completion point which made it eligible for this relief.

As it can be observed in the chart, the level of debt service has not changed much as it shows smooth trend from 1970 to 2014 and does not portray significant deviation from year to year. From 1970 GDP has been growing at a very slow rate, however it can be seen that from 1996, GDP growth picked up the pace and started to show a rapid growth, this can be explained by the fact that in 1990s economic liberalization happened to take place very rapidly which helped to turn around the economy by promoting private enterprises i.e. privatization policy, increasing revenue collection due to the establishment of Tanzania Revenue Authority e.t.c.

2. LITERATURE REVIEW

2.0 Empirical Literature Review
Researchers worldwide have investigated how external debt stocks affect economic growth of both developed and developing countries. Boboye & Ojo (2012) evaluated the effect of external debt on economic growth of Nigeria using Ordinary least squares regression. Their findings showed that external debt burden had a negative effect on the national income of Nigeria because it causes devaluation of currency and other economic problems.

Siddique et al. (2015) examined the impact of external debts on economic growth of Heavily Indebted Poor Countries (HIPC) in the period 1970 to 2007. Using co integration tests the study discovered that if heavily indebted countries would have reduced external debt stocks both in the short run and in the long run, then they it would have been possible for them to experience economic growth.

Shahzad et al. (2014) assessed the effect of external debt on the economic growth of Pakistan using ordinary least square multiple regression analysis. The overall findings showed that external debt level in Pakistan has significant negative effect on GDP hence urging the country to seek for debts forgiveness and must and invite more FDI. These findings were synonymous with those of (Ahmed et al. 2013) that found out that external debt had a negative effect on GDP; however the effect's magnitude is large in the short-run as compared to long run period.

A study was conducted by (Daud et al., 2013) to assess the contribution of external debt to economic growth of Malaysia. The results from Autoregressive Distributed Lag (ARDL) model test revealed that the increase in external debt stock leads to an increase in economic growth of Malaysia up to a particular optimal level excess of which will negatively affect the country's economy.ly contributed to the Malaysian economy.

Diallo (2009) employed the co-integration model to assess the influence of external debt on economic growth of Guinea. The results revealed that external debt accumulation has serious repercussions on the growth of per capita. On the other premise the study discovered that the rate of investment and human capital development are the crucial factors for economic growth.

Kinnavong (2016) also assessed the relationship between external debt and economic growth in Laos using a study period 1996-2015. The study used ordinary least squares regression and found a negative relationship between external debt and economic growth in Laos. Furthermore the study observed that when the amount of debt service increases, GDP growth rate deteriorates at a similar rate.

In a similar study, (Patenio & Tan Cruz, 2007) examined how external debt service payments affect economic growth of Phillipines. The study used vector autoregressive (VAR) model to examine this relationship representation and found out that economic growth of Phillipines isn't significantly impacted by external debt servicing and that external debt servicing is not that high for the country to experience debt overhang.

Checcherita & Rother (2010) examined the impact of high and growing government debt on economic growth of twelve (12) euro area nations. Through least squares regression analysis the study found a non-linear effect of external debt on economic growth. However debts beyond the optimal level were found to have detrimental effects on long-term economic growth which urges for more functional external debt policies.

Mashingaidze (2014) examined the impact of external debt on economic growth of Zimbabwe using time series data for the period (1980 – 2012). The results from granger causality tests showed that external debts cause to economic growth which implies that external debts influence Zimbabwe's (GDP). However the results indicate existence of debt overhang which can have repercussions on future economic growth.

Kasidi & Said (2013) evaluated the impact of external debt on economic growth of Tanzania; the study found out that external debts as well as debt servicing have significant impact on the growth of GDP. The results further showed that there is no co-integration between external debt and GDP. Babu et al. (2014) also conducted a similar study in East Africa Community (EAC) countries and found out that external debt has a significant negative impact on GDP per capita of this region.

2.1 Research Gap
A study of external debt and economic growth was conducted by (Kasidi & Said, 2013), their study period was (1990-2010) which generates only twenty (20) observations. These observations are not sufficient to generate appropriate conclusions after running data analysis tests. To generate good quality results it is important to use as many observations as possible i.e. 30 and above. This study covers a study period (1970-2015) which is equivalent to 45 observations which are considered appropriate to generate good conclusions. This study also used a combination of regression models, causality and co-integration tests to generate valuable conclusions.

2.2 The Conceptual Framework
The conceptual framework is presented in figure 1 below;

Figure 1: The conceptual framework
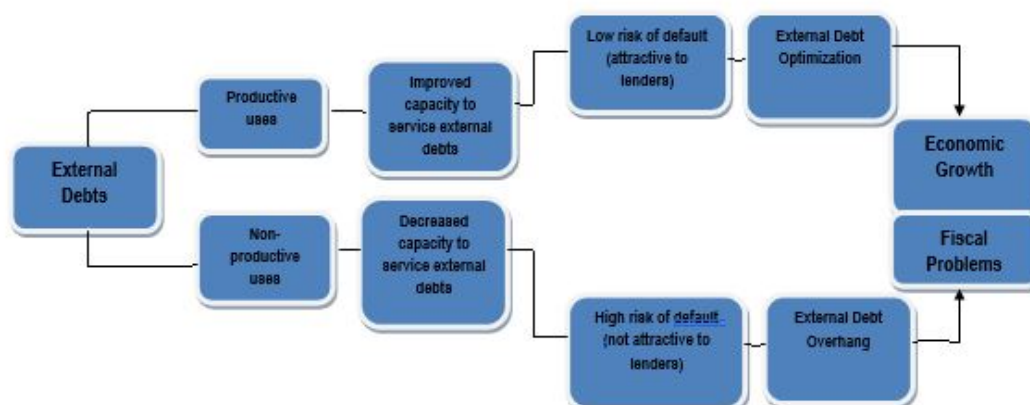
Source: Researcher's compilation (2017)

The framework presented in figure 1 above show how external debts can be a burden or a relief to the economy. The only way external debts stimulate can stimulate economic growth is if they are used to finance productive activities such as infrastructure development. Funding productive activities is advantageous to the economy because they enable the government to generate income which is used to service the debts hence making increasing capacity to borrow more and stimulate economic growth.

Misuse of external debts i.e. unproductive activities burdens the economy because these activities do not generate income reducing the ability to service debts. This can cause the country to be heavily indebted and considered to be risky by lenders. As a result the economy can experience debt overhang, this occurs when the economy is heavily indebted such that no one lender would risk extending more loans to that particular economy causing failure to undertake crucial development projects.

3. RESEARCH METHODOLOGY

3.0 Research Design
This study employs a quantitative research design; this is due to the fact that external debt and economic growth relationship can only be examined quantitatively using specific tools of analysis as they are shown in the analysis section. This design has also been employed by (Checherita & Rother, 2010) and (Siddique et al, 2015).

3.1 Types of Data
This study used secondary data from World Bank and International Monetary Fund (IMF) country statistics pertaining to external debts stocks, external debt service and Gross Domestic Product.

3.2 Study Period
The study employed time series data from (1970-2015), this implies that there are 45 observations that have been used for data analysis which are considered appropriate.

3.3 Study Variables

The variables employed in this study are as follows:

Table 1: Description of Study variables

	Variable	**Description**
	Dependent Variable (s)	
1.	Economic Growth	Real GDP growth Rate
	Independent Variables	
1.	External debts	Logarithm of External debt stocks
2.	External debts service	Logarithm of External debt service amount

3.4 Data Analysis
Data analysis tools were used in relation to the specific objectives of the study and STATA statistical data analysis software. The specific objectives together with their analysis tools are as follows;

Objective 1: To evaluate relationship between external debt components and economic growth
This objective was analyzed using ordinary least squares multiple regression analysis which has also been employed by (Shahzad et al, 2014) and (Kinnavong, 2016). This tool intends to establish a linear relationship between external debt components and economic growth. The multiple regression model is as follows;

GDP = βExt.debt stock + λExt.debt service + e

Where; β = coefficient of independent variable 1   e = stochastic error term

   λ = coefficient of independent variable 2

The following hypothesis was developed and tested;

Ho: There is a significant linear relationship between external debt components and economic growth.

H1: There is no significant linear relationship between external debt components and economic growth.

Auto correlation/Serial Correlation Diagnostics
It was vital to conduct auto correlation diagnostics so as check whether the multiple regression model developed has no this problem. This was tested using Breusch-Godfrey LM test which is an appropriate measure of auto correlation (Breusch, 1978) and (Godfrey, 1978); the following hypothesis was developed and tested;
Ho: There is no serial correlation
H1: There is serial correlation

Multi-collineality Diagnostics
When dealing with ordinary least squares regression analysis it was also crucial to perform multi-collineality diagnostics to check for the existence of this problem. This diagnosis was done using Variance Inflation Factor (VIF) for each particular

independent variable. VIF value of at least five (5) is considered appropriate for lack of multi-collinearity problem (Mansfield and Billy, 1982).

Unit Root Diagnostics

Both causality and co-integration test have an important prerequisite that the time series data used must be stationary i.e. do not have a unit root. The Augmented Dickey Fuller (ADF) test was used to test whether the time series data used contain a unit root (Dickey & Fuller, 1979). The following hypothesis was developed;
Ho: The time series data have a unit root (not stationary).

H1: The time series data do not have a unit root (stationary).

The specific objectives and the data analysis tools used were as follows;

Objective 2: To examine the causality between external debt and economic growth
This was analyzed using Granger causality Test; this tool is recommended for studying causality between two (2) variables (Granger, 1969) that are characterized by time series data. This is a very good tool to assess causality between two (2) variables whose data is time series in nature. Similar studies that employed this test include (Patenio & Tan Cruz, 2007) and (Kasidi & Said (2013). The following hypotheses were developed in relation to this test;

Ho: Economic growth does not cause external debt
H1: Economic growth does cause external debt

Ho: External debt does not cause economic growth.
H1: External debt does cause economic growth.

Objective 3: To assess the co-integration between external debt and economic growth.
This was analyzed using the Vector Error Correction Model (VECM) model known Johansen Co-integration Test. This test is appropriate for testing the long run association between variables (Johansen, 1988) and other studies that used this test include (Diallo, 2009) and (Kasidi & Said, 2013). The following hypothesis was developed and tested;

The following hypothesis was developed in relation to this test;
Ho: There is no long run association (co-integration) between external debt and economic growth.
H1: There is long run association (co-integration) between external debt and economic growth.

4. DATA ANALYSIS

4.0 Descriptive statistics
The descriptive statistics for all the variables used in this study are presented in table 2 below;

Table 2: Descriptive Statistics of Variables (USD Million)

Variable	Obs	Mean	Std. Dev.	Min	Max
externalde~d	46	4810.962	2250.799	173.36	10690.15
debtservic~d	46	98.55522	62.04281	3.8	239.2
gdpusd	46	11666.54	12794.59	2410.45	48200

The descriptive statistics from table 2 above show that the mean external debt stocks from 1970-2015 amounted to USD 4,810 million while the dispersion from the mean was USD 2,250 million which is significant and indicates significant differences between external debt stocks between early years and current periods. The maximum external debt stock was USD 10,690 million while the minimum was USD 173 million which shows significant changes in the level of external debt stocks.

In another variable namely external debt service, the results show the mean debt service of USD 98 million and the standard deviation of USD 62 million which shows significant dispersion of external debt service from the mean. The maximum debt service was USD 239.2 million while the minimum was USD 3.8 million which shows significant differences in external debt repayments among years.

The other variable was GDP, the mean amount of which was USD 11,666 million and the standard deviation was USD 12,794 million which is significant and shows that in the earlier years GDP was still very little as compared to recent years. The maximum GDP was USD 48,200 million while the minimum reported figure was USD 2,410 million which shows tremendous improvement in GDP over the years.

4.1 Results from Data Analysis
The results from data analysis are presented in accordance to the specific objectives of the study.

4.1.1 To evaluate relationship between external debt components and economic growth
This objective was analyzed using ordinary least squares multiple regression analysis. The findings are presented in table 3 below;

Table 3: Ordinary least squares multiple regression analysis results for the relationship between external debt components and economic growth

Source	SS	df	MS			
				Number of obs =		46
				F(2, 43) =		57.53
Model	5.3625e+21	2	2.6813e+21	Prob > F =		0.0000
Residual	2.0040e+21	43	4.6605e+19	R-squared =		0.7280
				Adj R-squared =		0.7153
Total	7.3666e+21	45	1.6370e+20	Root MSE =		6.8e+09

gdpusd	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
externalde~d	6.637589	.6193893	10.72	0.000	5.388471	7.886707
debtservic~d	-156.8365	22.47041	-6.98	0.000	-202.1524	-111.5206
_cons	-4.81e+09	2.40e+09	-2.00	0.052	-9.66e+09	3.73e+07

Source: Field data (2017)

The ordinary least square multiple regression results presented in table 3 above show that external debt variable has a significant positive relationship with GDP as indicated by the P>t value of 0.000 which is less than the 0.05 confidence interval. The results also show that external debt service variable has a significant negative relationship with GDP as indicated by the P>t value of 0.000 which is less than the 0.05 confidence interval. These results show that there is significant relationship between external debt components and economic growth; hence the null hypothesis cannot be rejected. The multiple regression model is also significant because the Prob>F value of 0.0000 is less than the 0.05 confidence interval.

The multiple regression model developed has a coefficient of determination (R-square) of 0.7280, this indicates that 72.8% of the variations in GDP are caused by external debt and its components, hence external debts can be correctly used to explain economic growth.

These results differ from those of studies such as those by (Checherita & Rother, 2010) that found a non-linear effect of external debt on economic growth in Europe. However, the findings are synonymous with those of (Boboye & Ojo., 2012; Shahzad et al., 2014) that found significant relationship between external debt and economic growth however for both studies external debts were found to be a burden to the studied countries' economies.

Serial Correlation Diagnostics

The Breush-Godfrey LM serial correlation test results for serial correlation are presented in table 4 below;

Table 4: Breusch-Godfrey LM test results for serial correlation

lags(p)	chi2	df	Prob > chi2
1	17.261	1	0.0000

Source: Field data (2017)

The results from table 4 for Breusch-Godfrey LM serial correlation test show that the Prob>Chi2 value of 0.0000 is less than the 0.05 confidence interval hence the null hypothesis cannot be rejected. This indicates that there is no serial correlation problem in the multiple regression models developed which makes it appropriate to explain the relationship between external debt components and GDP.

Multi-collineality Diagnostics

The Variance Inflation Factor (VIF) results for multi-collineality of independent variables are presented in table 5 below;

Table 5: Variance Inflation factor results for multi-collineality

Variable	VIF	1/VIF
debtservic~d	1.88	0.532871
externalde~d	1.88	0.532871
Mean VIF	1.88	

Source: Field data (2017)

The results from table 5 above show that both external debt stock and external debt service variables have VIF values of 1.88 which are less than 5. This indicates that there is no multi-collineality problem among the two (2) independent variables which makes the multiple regression model appropriate for explaining the external debt and economic growth phenomenon.

4.1.2 Unit Root Diagnostics Results

Before carrying out the causality and co-integration tests, it was vital to ensure that time series data do not contain a unit root. The unit root test was conducted for each variable using Augmented Dickey-Fuller (ADF) test. After conducting this test for each variable it was observed that all variables except GDP had a unit root, so first differencing method was applied to the time series data of these variables. The test results are as follows;

ADF Results for Unit Root of External Debt Stock Data

The results are presented in table 6 below:

Table 6: ADF results for external debt stock

Dickey-Fuller test for unit root   Number of obs   =   45

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
		——————— Interpolated Dickey-Fuller ———————		
Z(t)	-6.710	-3.614	-2.944	-2.606

MacKinnon approximate p-value for Z(t) = 0.0000

The results from table 5 above show that the test statistic value of -6.710 is greater than the 5% critical value of -2.944 hence the null hypothesis is rejected. This means that the time series data used to represent external debt stocks do not contain a unit root i.e. stationary.

ADF Results for Unit Root of External Debt Service Data

The results are presented in table 7 below:

Table 7: ADF results for external debt service

Dickey-Fuller test for unit root   Number of obs   =   45

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
		——————— Interpolated Dickey-Fuller ———————		
Z(t)	-6.505	-3.614	-2.944	-2.606

MacKinnon approximate p-value for Z(t) = 0.0000

The results from table 7 above show that the test statistic value of -6.505 is greater as compared to the 5% critical value of -2.944 so the null hypothesis is rejected. This indicates that the time series data used to represent external debt service do not contain a unit root.

ADF Results for Unit Root of Gross Domestic Product (GDP)
The results are presented in table 8 below;

Table 8: ADF results for external debt service

Dickey-Fuller test for unit root   Number of obs   =   45

| | Test Statistic | 1% Critical Value | Interpolated Dickey-Fuller | |
			5% Critical Value	10% Critical Value
Z(t)	-4.981	-3.614	-2.944	-2.606

MacKinnon approximate p-value for Z(t) = 0.0000

The results from table 8 above show that the test statistic value of -4.981 is greater than the 5% critical value of -2.944, so the null hypothesis is rejected which indicates that the time series data used to represent GDP do not contain a unit root.

Conclusively, all three (3) variables namely; Gross Domestic Product (GDP), external debt stock and external debt service do not contain a unit root i.e. are stationary. This makes these data appropriate for further causality and co-integration analysis.

4.1.3 To Examine the Causality between External Debt and Economic Growth
This objective was analyzed using the Vector Auto Correlation (VAR) method known as Granger Causality Test. This test is aimed at assessing whether external debt stocks of Tanzania cause the economy to grow. The results are presented in table 9 below;

Table 9: Granger causality test results for causality between external debt and economic growth

Equation	Excluded	F	df	df_r	Prob > F
externaldebtsto~d	gdpusd	.21768	4	33	0.9267
externaldebtsto~d	ALL	.21768	4	33	0.9267
gdpusd	externaldebtsto~d	4.3111	4	33	0.0065
gdpusd	ALL	4.3111	4	33	0.0065

The results from table 9 above show that at first instance that the Prob>F value of 0.9267 is greater than the 0.05 confidence interval. So the null hypothesis cannot be rejected which indicates that economic growth as measured by GDP does not cause external debt. These results statistically show that the growth in Tanzanian economy does not cause external debt rather other factors apart from economic growth cause external debt.

On the other premise the results show that the Prob>F value of 0.0065 is less than the 0.05 confidence interval, hence the null hypothesis can be rejected which indicates that external debts cause economic growth in Tanzania.

4.1.4 To Assess the Co-Integration between External Debt and Economic Growth
The last specific objective was to examine the long run association/co-integration between external debt and economic growth represented by GDP. This was assessed using Johansen Co-integration test and the results were presented in table 10 below;

Table 10: Johansen Co-integration test for long term association between external debt and economic growth

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                        Johansen tests for cointegration
Trend: constant                                         Number of obs =      44
Sample:  1972 - 2015                                              Lags =       2
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maximum rank	parms	LL	eigenvalue	trace statistic	5% critical value
0	6	-7.3437001	.	145.6027	15.41
1	9	58.309369	0.94942	14.2966	3.76
2	10	65.457661	0.27742		

The results from table 10 above show that the trace statistic value of 145.6027 is greater than the 5% critical value of 15.41, so the null hypothesis is rejected. This indicates that there is a long run association between external debt and economic growth in Tanzania. These results show that the external debt association with economic growth is not a phenomenon that can be measured in the short term. These results resemble those of (Siddique et al. (2015) that also found co-integration between external debt and economic growth however other studies such as (Kasidi & Said, 2013) found no co-integration between external debt and economic growth.

5. CONCLUSIONS AND RECOMMENDATIONS

The findings of this study have statistically shown that there is a significant positive relationship between external debt and economic growth and the fact that external debts cause economic growth. These results are an indication that despite raising levels of external debts in Tanzania, economic growth has been stimulated through these debts. From the theoretical view, this can only be achieved if external debts are used to fund productive activities and this seems to be the case for Tanzania that has been borrowing externally for more than four (4) decades. The results have also shown that there is a long-term association between external debt and economic growth which further solidifies this viewpoint. However, the results have shown a significant negative relationship between debt servicing and economic growth because these debts are repaid from the government revenue hence it is not surprising that debt servicing is negatively related to GDP.

By the fact that external debts cause economic growth in Tanzania then these debts can be said to have provided a relief to Tanzania by covering budget deficit and stimulate economic growth by channeling the debts towards development/income generating activities. So, the government is argued to continue channeling external debts in

productive activities to stimulate other economic sectors such as mining, agriculture, tourism, transportation all of which generate significant revenue to the government. This can help to reduce the debt servicing burden because the government will have income to service the debts hence making it less risky to lenders which can enable it to further borrow and achieve more economic growth. However, caution must be taken to keep external debts at an optimal level to avoid debt overhang which can have detrimental effects on the economy. The government should ensure that the rate of GDP growth exceeds the rate at which external debts grow as this is the only way the economy will continue to flourish.

APPENDIX

Results from Granger Causality Test for Lag 1-Lag 4

	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
external de~d external de~d						
L1.	.0031434	.1869608	0.02	0.987	-.3772312	.383518
L2.	-.0146028	.2210917	-0.07	0.948	-.4644172	.4352115
L3.	.0094729	.0291539	0.32	0.747	-.0498411	.0687869
L4.	.0116139	.0288954	0.40	0.690	-.0471741	.070402
gdpusd						
L1.	-.0186414	.3014844	-0.06	0.951	-.632016	.5947332
L2.	.17874	.2812559	0.64	0.529	-.3934795	.7509595
L3.	.0551319	.2497592	0.22	0.827	-.453007	.5632708
L4.	.0845305	.2421904	0.35	0.729	-.4082096	.5772706
_cons	.0357872	.0398492	0.90	0.376	-.0452866	.116861
gdpusd external de~d						
L1.	-.3888576	.1154429	-3.37	0.002	-.623728	-.1539873
L2.	-.1934956	.1365177	-1.42	0.166	-.471243	.0842518
L3.	-.003006	.0180017	-0.17	0.868	-.0396307	.0336187
L4.	.0150132	.017842	0.84	0.406	-.0212867	.0513131
gdpusd						
L1.	.3056359	.1861579	1.64	0.110	-.0731052	.6843771
L2.	.0295861	.1736674	0.17	0.866	-.3237429	.3829152
L3.	.09149	.1542191	0.59	0.557	-.2222711	.4052511
L4.	.058535	.1495456	0.39	0.698	-.2457178	.3627878
_cons	.0711028	.0246057	2.89	0.007	.021042	.1211635

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