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## EXTERNAL DEBT SERVICING AND ECONOMIC GROWTH IN KENYA: FROM 1965 - 2018

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### ABSTRACT

A developing country like Kenya compliments its revenue through public borrowing. The successive governments have always acquired huge sums of public debt to finance national development plans in Kenya. High levels of public debts require massive debt service which has mixed effects on economic growth. Even as studies indicate mixed effects of public debt servicing and economic growth, the Kenyan government continues to borrow. This study therefore examined the relationship between external debt servicing and economic growth. Data spanning from 1965 to 2017 was used. An explanatory research design was applied. Secondary data obtained from World Bank Sources, Central Bank of Kenya, International financial statistics like the International monetary fund and Kenya National Bureau of Statistics was used for analysis. Data was analyzed using EVIEWS version 7.2. The findings indicated that association between debt service and economic growth was negative and significant. The study concluded that the association between debt service and GDP is negative and significant. This implies as the government channels more of its revenue to servicing of external debts, it significantly hurts the economy.



The study also recommends that the contribution of external debt servicing to economic growth in Kenya is 56%. The study recommends that prudential fiscal management measures are required to avoid an unnecessary increase in overall public debt. A reduction in borrowing will enable the country to use a greater proportion of their tax revenues for investments rather than repaying loans, thereby increasing economic growth.

**Key Words:** *External Debt Servicing, Economic Growth, Kenya*

## **INTRODUCTION**

Public debt is the total amount of money that the government has borrowed from any source (Patenio & Tan-Cruz, 2007). It is the difference between what the national government spends and the revenue it receives during a particular year. So, each year's deficit is added to the existing debt (Munyigi, 2013). According to Patenio and Tan-Cruz (2007), a public debt is a debt owed to both external and internal parties by a government of an independent country. External Public Debt is debt owed to external creditors which are multilateral creditors such as African Development Bank, World Bank, International Monetary Fund and bilateral creditors who are essentially governments of other countries and commercial creditors. External debt is funds borrowed from foreign lenders, this can include private sources, other countries and the International monetary fund. The effect of Public debt on economic growth remains a key area of interest. Every country is striving to have sustainable economic development. According to Reinhart and Rogoff, (2011), the greatest hindrance to sustainable development is fiscal deficits mainly driven by public debt servicing and widening current account deficits.

### **Public Debts and Public Debt Servicing in Advanced Countries**

International Monetary Fund (2010) report stated that most of the European countries experienced external public debt in excess of 100% of GDP by 2010. Before the onset of the 2008 financial crisis, public debt of the Euro zone countries was about 70% of GDP on average; this was 10% higher than in the early 1990s. Since 2007, debt ratio has increased by 10% to 60% of GDP. This increase caused countries like Spain, Portugal, Ireland and Greece to experience severe difficulties in servicing their debts.

According to International Monetary Fund (2012), the close of financial year 2012 found many economies still weighed down by high debt burdens across multiple sectors. The overall outlook remained fragile. According to World Economic Outlook (2012), the global growth dropped from about 4 percent in 2011 to 3½ percent in 2012. The euro area went into a mild recession in 2012 as a result of the sovereign debt crisis, the effects of bank deleveraging on the real economy, and the impact of fiscal consolidation. In the advanced economies as a group, output expanded by only 1½ percent in 2012 in Japan and United States. Job creation in these economies remained sluggish and unemployment remained near 8 percent. The report further links this to the growing public debts and its servicing.

### **Public Debts and Public Debt Servicing in Emerging and Developing Countries**

In emerging market and developing economies, real gross domestic product (GDP) growth slowed slightly to 5¾ percent in 2012, from 6.2 percent in 2011 (International Monetary Fund, 2012) thanks to rapid public debts growth and servicing. IMF (2011) reported that the debt crisis of sub-Saharan and other developing countries increased rapidly following the global debt crisis that emerged in the early 1980s. The crisis led to over-borrowing by most developing African countries and increased lending by the international banks in the same period.

IMF (2012) report reflected the effects of the increased debts in developing countries showing in the 1980s per capita income of sub-Saharan Africa which declined at an annual average rate of 2.2% while per capita private consumption



went down by 14.8%. During the same period, the volumes of export were 4.3% while terms of trade fell by 9.1%. Between 1981 and 1990 the GDP growth of these countries was 1.7% in average. The decline in growth rate of Sub-Saharan Africa to negative -0.9% is a sharp contrast with East Asia's real per capita GDP growth rate of 6.3% and China's impressive growth rate of 8.2% during the same period. With the build-up of external debt and poor economic performance of SSA economies, the debt problem has risen to significant levels and the burden has become even worse for servicing. According to the report published by IMF (2013), Tanzania is ranked third as the most indebted country in Eastern Africa. It comes after Kenya and Burundi while Uganda is fourth. Rwanda has the lowest public debt among the five countries with 22%. Similarly, Kenya is ranked second with 28.5% foreign debt service while Burundi is leading with 50%.

## **STATEMENT OF THE PROBLEM**

According to CBK (2012), Public debt in Kenya has been on upward trend especially for the last ten years. In 2010, the country's total public debt amounted to Kshs.1.2 trillion (Maana, Owino & Mutai, 2008). A consequence of high public debts is high servicing ratio which diverts resources away from special provisions to repay debt. A report by UNICEF (2000) attributed the loss of 30,000 children each day due to poverty because the governments diverted most of their resources to debt servicing.

The debate on public debt servicing and economic growth yield contradicting results. Some studies present a negative effect of public debts servicing on economic growth. For example, studies by Ribeiro, Vaicekauskas and lakštutiene (2012); Shah and pervin (2010); Reinhart and Rogoff (2010); Kumar and Woo (2010); Chironga (2003). Other studies did not find any relationship between public debts servicing and economic growth. For example, studies by Were (2001); Makau (2008) and Schclarek (2004). The recent increase in public debt across developing countries including Kenya, during and after the recent global crisis has made it a prominent policy issue especially because of the increasing debt service levels. Currently, Kenya is ranked second in Eastern Africa region with 28.5% foreign debt servicing and this called for a need to investigate the effect it has on the economy in the wake of the contradicting results.

## **OBJECTIVE OF THE STUDY**

To determine the relationship between external debt servicing and economic growth in Kenya.

## **THEORETICAL LITERATURE REVIEW**

### **Dependency Theory**

The interaction between the developing and developed nations is captured by the theory. According to the theory, poor states are impoverished and rich ones enriched by the way poor states are integrated into the "world system". The theory originates with two papers published in 1949 – one by Hans Singer and another one by RaúlPrebisch. Matias (2004) stated that theory has its roots from the Marxian perspective in what was seen as a direct challenge of the market economic policies adopted in the post-war era which advocated a free market. Although painful for a time, some of the methods of market liberalization will in the long run help these nations to establish their economies making them competitive at the global level. On evidence available economic growth of industrialized countries did not necessarily lead to growth in the poorer countries (Cheru, 2010).



According to the theory, the developed world perpetuated dependence through various means which did not end when independence was attained. Poorer countries produce primary products to developed countries who in turn process them and re-export them to poorer countries at value added. It has been posited that this involves media control, politics, banking and finance, education (which translates to all aspects of human resource development) and sport. Domination by the developed world has continued through the great influence of transnational companies. Supporters of the dependency theory propose that only through the delinking by the developing countries from the developed world would we have development seen in these countries. The wealthy nations counter attempts by dependent nations to resist influence and actively keep developing nations in a subservient position often through economic sanctions or by proscribing free trade policies attached to loans granted by the World Bank or International Monetary Fund. (Giorgio S. 2008)

The dependency theory also suggests that dependency increases as the developed and developing world continue to interact in the world market system because of how they are integrated into the system. Wealthy countries use their wealth to influence the adoption of policies that increase wealth of the developed nations at the expense of the developing nations. This causes a situation where capital moves to the developed nations but not developing nations. This causes a situation where capital moves to the developed nations, which forces the latter to seek larger loans which further indebts them further.

### **The Debt Overhang Theory**

The debt overhang theory is based on the premise that if the total amount of debt exceeds the country's repayment ability in the future, then the expected debt service of that country will be an increasing function of its output level. This implies that part of the returns gained from investing in the domestic market is taken by the foreign creditors thus discouraging domestic investments (Claessens, 1996). In such a situation the indebted country is left with a small proportion of any increases in output and exports because part of the proceeds is used to service external debt.

The theory postulates that reducing debt obligation lead to a rise in investment and repayment capacity. When this happens, the outstanding debt is more likely to be repaid therefore reducing chances of debt default. Similarly when the effect is strong, the indebted country is said to be on the wrong side of the debt Laffer curve. Laffer describes the relationship between the level of debt and the country's repayment ability which implies that there is a maximum at which accumulation of debt promotes growth (Elbadawi, 1996). Therefore, the debt overhang hypothesis predicts that, if there is likelihood that in future, debt will be larger than the country's repayment ability, then the cost of servicing the debt will depress further domestic and foreign investment (Krugman, 1988; Sachs, 1990). Baum, Anja, Cristina and Philipp (2013) states that there is a negative relationship between economic growth and public debt by arguing that high levels of indebtedness discourage investment and negatively affect growth as future tax revenues go to repay debt. Kenya has been experiencing rapid external debts growth over the years. Some of this debt is over 50 years old with less prospects of full service and to service, the government resorts to borrowing domestically to service the external debt thus worsening the case.

### **EMPIRICAL LITERATURE REVIEW**

Public debts in low income countries have significant effects on government budget, macroeconomic stability, private sector lending and ultimately growth performance (Christensen, 2005). UNICEF (2000) argues that debt is killing children. Countries are diverting resources away from special provisions to repay debt; those most affected are the poor,



especially women and children. UNICEF (2000) attributed the loss of 30,000 children each day due to poverty as government debt related. In the Kenyan context, a study by Were (2001) focusing on Heavily Indebted Poor Countries (HIPC) found no adverse impact of debt servicing on economic growth but proved some crowding-out effects on private investment. Another study by Schlarek (2004) found no evidence of external debt servicing on total factor productivity but a negative relationship with economic growth.

Makau (2008) established the relationship between external public debt servicing and economic growth in Kenya using both OLS and error correction modeling. The empirical results in the short run estimated model indicated that the coefficients of external debt to GDP had the correct sign and significant. In the long run estimated model, the coefficients of debt to GDP were significant. Kibui (2009) used time series data between the years (1970-2007) to investigate the impact of external debt on public investment and economic growth in Kenya. It used reduced form growth model augmented with debt variables to examine the impact of external debt on public investments and economic growth in Kenya. The Empirical results indicated that public investment has a negative relationship with both the stock of external debt expressed as a percentage of GDP and debt service ratios. The results indicate that debt relief could act as a catalyst for investment recovery and economic growth in Kenya.

## RESEARCH METHODOLOGY

The study adopted an explanatory research design. This study analyzed time series data collected yearly from 1965 to 2017. The data analysis methods were as discussed:

**Trend Analysis:** The study conducted trend analysis to review the behavior of external debt service and economic growth over time since 1965 to 2017. Line graph was used.

**Descriptive Statistics:** Descriptive statistics was also conducted to establish the measures of central tendency (Mean, median), measures of variation (Standard deviation) normality of the variables using Jarque Bera test. For a normally distributed variable the asymptotic coefficient was equal to zero, any JB test value that is not zero is thus a deviation from the normality assumption. Likewise, Skewness coefficient for a normally distributed variable is zero while that of kurtosis is three. Deviations from normality assumption necessities transformation of all or some variables into logarithms, which has the effect of instilling normality (Agrawal *et al.*, 2010).

**Correlation Analysis:** The study used correlation analysis to investigate the association between the independent and the dependent variables as well as presence of Multicollinearity between the predictor variables.

### Regression Analysis

An ordinary Least Square Regression analysis was used to determine the effect of external debt servicing on economic growth in Kenya. Previous studies for instance, Reinhart and Rogoff (2010 and 2012), Mustafa (2010), Shah and Pervin (2010) as well as Makau (2008) have used ordinary least square regression model to link public debt servicing to economic growth.

Economic Growth = f (External Debt Servicing)

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$



Where:

$Y$  = Economic Growth;  $X_1$  = External Debt Servicing;  $\beta_0$  = Y intercept;  $\varepsilon$  = Error term

### Heteroscedasticity

Assumptions of OLS stipulate that the residuals should be constant across time (Homoskedastic). Heteroskedasticity occurs when the variances of the error terms are not constant. The variances of the estimated estimators are not the minimum variances. This test was carried out to ascertain whether using regression model in OLS was sufficient to the set of data in this study.

### Autocorrelation Test

Another assumption of OLS is that the residuals should not be correlated with one another over time. If the residuals are correlated over time, then there is a problem of serial correlation or first order autocorrelation. The consequences of autocorrelation are the same as those of heteroskedascity (Brooks, 2008). Serial correlation test was performed to ascertain whether using regression model in OLS was sufficient for the set of data in this study.

### Residual Normality Test

Another assumption of OLS is that the residuals of a multiple regression model should be normally distributed. A normality test was conducted using both graphical and Jarque Bera test. The test for normality was first examined using the graphical method and further done using the Jarque-Bera test which is a more conclusive test than the graphical inspection approach of testing for normality.

### Residual Plots

Residual analysis of the error term after the multiple regression model was also conducted to evaluate the goodness of the fit of the fitted regression model (Greene, 2002). If the graph of fitted versus residuals form a pattern, it is an indication that the regression model might not be a good fit; this test was performed to evaluate the goodness of the fitted regression model.

### Unit root Test

Non Stationarity has always been regarded as a problem in the analysis of time series data. Time series data is stationary if its mean, variance and covariance do not vary overtime. Non-stationary data leads to spurious regression due to non-constant mean and variance (Dimitrova, 2005). Differencing a series using differencing operators produces other set of observations. Data that is differenced once is given as:

$$\Delta X_t = X_t - X_{t-1}.$$

A series which is stationary without any differencing, is said to be I (0) or integrated of order 0. However, a series which is stationary after first-difference is said to be I (1) or integrated of order 1. After the stationarity of the series has been established, a test for the existence of a unit root if any (moment of the series: independence of mean, mode and kurtosis over time) in the variables is carried out by the use of Augmented Dickey-Fuller (ADF) test.



### Causality Test

Causality analysis is normally carried out to review the presence of casual relationship between the variables in a study. The Granger causality test was employed to determine the presence or otherwise of these relationships between the dependent variable and the explanatory variables. Causality tests review the causal relationship between variables in the model and the direction to which the relationship is running from or to (Brooks, 2008). One-way direction gives a uni-directional causality and two-way direction gives bi-directional causality.

### Variance Decomposition Test

Granger causality does not explain the proportion of the movements in the dependent variable that are due to their own shocks and shocks of the predictor variables. A shock on a variable affects its own course and is also transmitted to all other variables in the model. The study used variance decomposition to determine how much of the period steps ahead, a forecast error variance of the dependent variable are explained by the dependent variable.

Variance decomposition determine how much of the S- steps ahead forecast error variance of a given variable is explained by innovations (error terms as it is called in time series) to each of the explanatory variables. S is 1, 2,...n. In variance decomposition an error term of one variable is introduced to a shock while holding all other error terms constant (Brooks, 2008).

## FINDINGS AND DISCUSSION

### Trend Analysis

The study conducted the trend analysis in order to establish and graphically represent the change in the variables over time. This trend gives a picture of the stationarity of the variables. The study findings indicated that external debt service has indicated unsteady increasing trends over the study period. Economic growth also had unsteady increasing and decreasing trends.

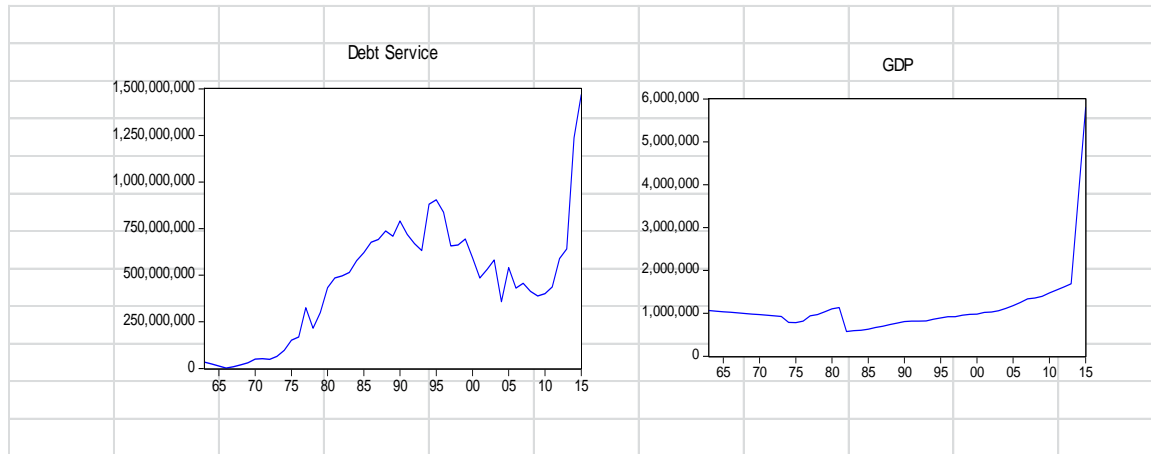


Figure 1: Trend Analysis



## Descriptive Statistics

Descriptive analysis was conducted to indicate the mean, standard deviation, Skewness, Kurtosis and normality of the variables using the Jarque Bera statistic which is a combination of both Skewness and Kurtosis. Under the null hypothesis of a normal distribution, the Jarque-Bera statistic is distributed with 2 degrees of freedom. The reported Probability is the probability that a Jarque-Bera statistic exceeds (in absolute value) the observed value under the null—a small probability value leads to the rejection of the null hypothesis of a normal distribution. The descriptive findings indicated that debt service and GDP indicated large variations over the years.

**Table 1: Descriptive Statistics**

	<b>DEBT SERVICE</b>	<b>GDP</b>
Mean	463,342,561.006	1,137,049.824
Median	485,480,000.000	975,477.255
Maximum	1,470,271,333.333	5,808,849.780
Minimum	2,025,200.000	577,770.054
Std. Dev.	321,254,236.051	795,256.633
Skewness	0.494	4.591
Kurtosis	3.574	25.662
Jarque-Bera	3	1,320
Probability	0.237	0.000

The descriptive statistics discussed above indicated that the data for debt service was normally distributed (P-Value > 0.05) while the data on GDP was not normally distributed (P-Value < 0.05). The data on GDP was hence transformed into logs to base ten in order to normalize it. JB test was conducted again as shown in Table 2 to indicate that GDP became normally distributed after log transformation. The test for normality after transformation indicated that the null hypothesis of the data being normally distributed was not rejected at 5% level of significance indicating that log transformations normalized the data

**Table 2: JB test of Normality after Log Transformation**

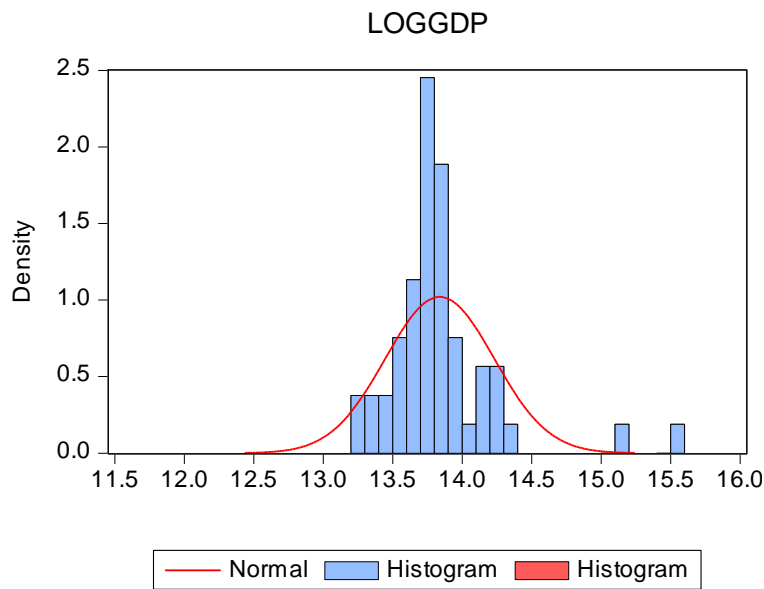
Jarque-Bera	169.707
Probability	0.052

Figure 2 indicates the graphical representation of normality after log transformation.





**Figure 2: Graphical Normality Tests after transformation**



**Correlation Matrix**

The study used correlation to establish the association between external debt service and GDP growth. The results indicated significant associations between GDP and debt service. It was established that external debt servicing has a negative significant effect on economic growth. The findings agree with that of Schclarek (2004) that external debt servicing has a negative relationship with economic growth. The findings were contrary to that of Were (2001) who revealed that there is no significant relationship between external debt servicing and economic growth.

**Table 3: Correlation Matrix**

	GDP
GDP	1
DEBT SERVICE	(0.4924)*

**Diagnostic Tests**

**Heteroscedasticity Test**

Heteroscedasticity occurs when the variances of the error term are not constant, this has the consequence of arriving at estimators that are unbiased and consistent but they are inefficient. The variances of the estimated estimators are not the minimum variances. This test was carried out to ascertain whether using a multiple regression model in OLS is sufficient to the study. Heteroscedasticity test was carried out using Breusch-Pagan- test and the results were reported in table 4.



The null hypothesis of homoscedasticity is rejected if the calculated statistics value exceeds critical table value. The results indicate that the observed probability chi square significance of 0.052 was not significant hence the null hypothesis of existence of homoscedasticity is not rejected. This meant that based on this test alone the fitted multiple regression model was a good fit.

**Table 4: Heteroscedasticity Test: Breusch-Pagan Test**

<b>Heteroskedasticity Test: Breusch-Pagan-Godfrey</b>			
Obs*R-squared	20.8134	Prob. Chi-Square(4)	0.052

#### **Autocorrelation Test**

The test for autocorrelation was performed to establish whether residuals are correlated across time. OLS assumptions require that residuals should not be correlated across time and thus the Breusch–Godfrey test which is also an LM test was adopted in this study. The null hypothesis is that no first order serial /auto correlation exists. Based on the findings, the observed probability chi square was not significant at 5% level of significance hence the null hypothesis was not rejected implying that there was no presence of first order serial correlation.

**Table 5: Breusch-Godfrey Serial Correlation LM Test**

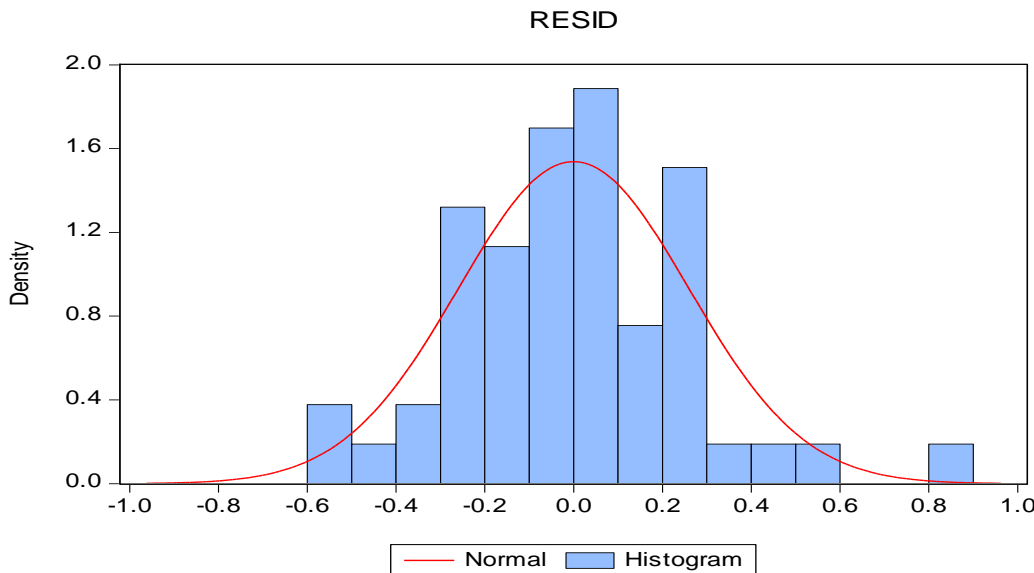
<b>Breusch-Godfrey Serial Correlation LM Test:</b>			
Obs*R-squared	29.166	Prob. Chi-Square(2)	0.064

#### **Residual Normality Test**

The test for normality was first examined using the graphical method approach as shown in the Figure 3 below. The results in the figure indicate that the residuals are normally distributed.



**Figure 3: Graphical Residual Normality Representation**



To further establish whether the residuals are normally distributed the study adopted the Jarque-Bera test which is a more conclusive test than the graphical inspection approach of testing for normality. The results in Table 6 indicate the results of the Jarque-Bera test. The null hypothesis under this test is that the residuals are significantly different from a normal distribution. Given that the p-value is greater than 5% for the residual, the null hypothesis is not rejected and thus the conclusion that the residuals are normally distributed.

**Table 6: Residual Normality Test (Jarque Bera Test)**

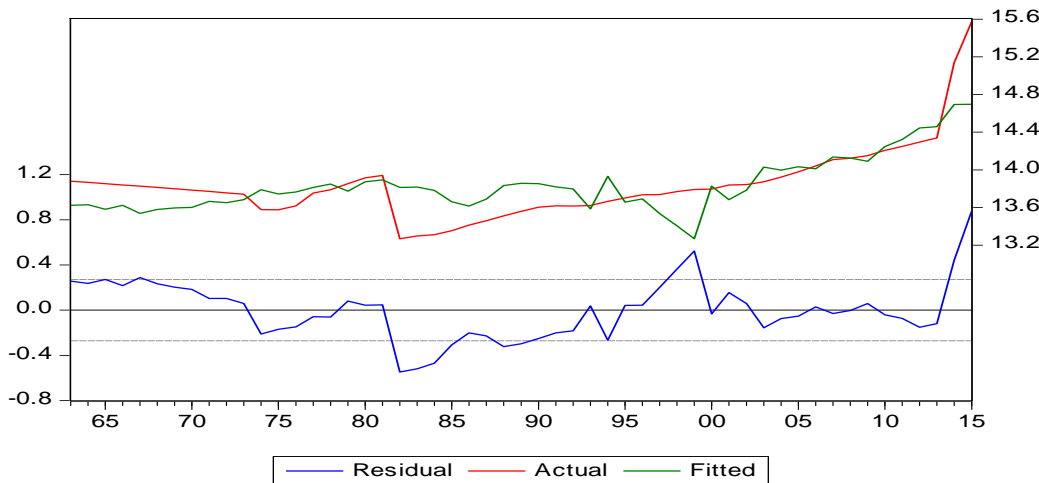
Jarque-Bera	6.9918
Probability	0.053

**Residual Plot**

Residual analysis is a post regression estimation test that evaluates the goodness of the fit of the fitted regression model (Greene, 2002). If the graph of fitted versus residuals form a pattern is an indication that the regression model might not be a good fit. Results in Figure 4 indicate that the residuals seem to form patterns and that indicate that the regression model was a good fit. Regression model was thus found to be sufficient for analyzing the data in this study because of the absence of serial correlation, Heteroskedasticity and residuals were normally distributed.



Figure 4.5 Residual Plot



**Unit Root Test**

Most economic variables are usually non-stationary in nature and prior to running a regression analysis. Unit root tests were thus conducted using the ADF test to establish whether the variables were stationary or non-stationary. The purpose of this is to avoid spurious regression results being obtained by using non-stationary series.

Augmented Dickey Fuller (ADF) test was employed to determine existence stationarity or otherwise. ADF was chosen because it takes care of autocorrelation in case it is present in the series (Brooks, 2008).

HO:  $\alpha = 0$  (the series has a unit root).

H1:  $\alpha \neq 0$  (the series has no unit root).

The decision criterion is through comparison of the absolute tau statistic value (tau calculated) and Dickey - Fuller critical table value and if the absolute tau statistic value is greater than the absolute Dickey - Fuller critical table value the null hypothesis that the series has a unit root is not rejected. The results indicated that the two variables were non-stationary at level hence first differencing was conducted.

**Table 7: Unit Root (None and Level)**

Variable name	ADF Statistic	1% Level	5% Level	10% Level	Comment
Debt service	1.534	-2.610	-1.947	-1.613	Non-Stationary
GDP	1.643	-2.611	-1.947	-1.613	Non-Stationary



## Regression Model

The study conducted a regression model to establish the effect of external debt servicing on economic growth. Previous studies for instance, Reinhart and Rogoff (2010 and 2012), Mustafa (2010), Shah and Pervin (2010) as well as Makau (2008) have used ordinary least square regression model to link public debt servicing and economic growth.

**Table 8: Regression Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Debt Service	(0.0001)	0.000	2.322	0.024
C	13.268	0.226	58.809	0.000
R-squared	0.560			
Adjusted R-squared	0.523			
F-statistic	15.245			
Prob(F-statistic)	0.000			

$$\text{Economic Growth} = f(\text{External Debt Service}_t) + e_t$$

$$\text{Economic Growth} = 13.268 - 0.0001 (\text{External Debt Service})$$

The findings indicated that external debt servicing has negative but significant effect on economic growth in Kenya (Beta = -0.0001, Sig < 0.05). The R-square value was 0.560 which implies that external debt servicing accounts for up 56% of the variation in economic growth. The model was also fit as shown by a significant P-Value (Sig < 0.05). The findings are consistent with Makau (2008) who established the relationship between external public debt servicing and economic growth in Kenya and established a significant effect. Similarly, Kibui (2009) indicated that public investment has a negative relationship with both the stock of external debt expressed as a percentage of GDP and debt service ratios.

## Causality Test

Causality analysis is normally carried out to review the presence of casual relationship between the variables in a study. The Granger causality test was employed to determine the presence or otherwise of these relationships between the dependent variable and the explanatory variables. Causality tests review the causal relationship between variables in the model and the direction to which the relationships is running from or to but (Brooks, 2008). The null hypothesis is rejected if the F-statistic is significant. The findings in Table 9 indicated a uni-directional relationship between debt service and economic growth. The null hypothesis that GDP Growth does not Granger Cause Debt Service was rejected (Sig < 0.05) hence it was concluded that GDP Growth Granger Cause Debt Service but reverse is not true.



**Table 9: Granger Causality Test**

Null Hypothesis	F-Statistic	Prob.
Debt Service does not Granger Cause GDP Growth	1.323	0.276
GDP Growth does not Granger Cause Debt Service	1.926	0.015

**Variance Decomposition**

Granger causality does not explain the proportion of the movements in the GDP growth that are due to their own shocks and shocks of the other variables. A shock on a variable affects its own course and is also transmitted to all other variables in the model. The study used variance decomposition to determine how much of the period steps ahead, a forecast error variance of GDP is explained by innovations of external debt service. The study findings indicated that in the first percentile, that is the first decade from independence, changes in GDP were largely due to its own variations which stood at 100% and External Debt Service didn't contribute to the changes in GDP. The findings further indicate that in the second decade, the changes in GDP were still largely attributed to itself while external debt service contributed less than 2% to GDP. The findings reveal that as the years progressed, the contribution of external debt service to GDP growth increased to more than 18%.

**Table 10: Variance Decomposition**

Period	S.E.	LOG GDP	DEBT SERVICE
1	0.186	100.000	0.000
2	0.305	97.290	1.316
3	0.465	90.307	6.702
4	0.638	84.901	12.303
5	0.861	79.190	18.372

**CONCLUSIONS**

The study concluded that the association between debt service and GDP is negative and significant. This implies as the government channels more of its revenue to servicing of external debts, it significantly hurts the economy. The study also recommends that the contribution of external debt servicing to economic growth in Kenya is 56%.



## **RECOMMENDATIONS**

The study recommends that prudential fiscal management measures are required to avoid an unnecessary increase in overall public debt. A reduction in borrowing will enable the country to use a greater proportion of their tax revenues for investments rather than repaying loans, thereby increasing economic growth.

## **CONFLICT OF INTEREST**

No potential conflict of interest was recorded by the Authors

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