EFFECTS OF GOVERNMENT EXPENDITURE, TAXES AND INFLATION ON ECONOMIC GROWTH IN KENYA: A DISAGGREGATED TIME SERIES ANALYSIS

BY:

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DECLARATION

I, Thuo Victoria Wambui hereby submit this research work and declare that this research project is my original work and has not been presented for an award of a degree in any University

Sign…… …… Date……

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DEDICATION

I specially dedicate this research project to my husband Gabriel Chege and our sons Muchiri and Thuo.

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ABSTRACT

The purpose of this study was to establish the effect of taxes, inflation and government expenditure on economic growth in Kenya. The study sought to establish the effect of taxes on economic growth, the effect of inflation on economic growth and the effect of public expenditure on economic growth. The study focused on a period of 20 years after major liberalization of trade took place in Kenya.

Secondary data was used and it was derived from various relevant bodies such as the Kenya National Bureau of Statistics. The data collected was analyzed using excel spreadsheets. Data was also obtained from Kenya Revenue Authority.

The study revealed that there is a linear relationship between each of the independent variables and the dependent variable. Further the study showed that the relationship is not only linear but also positively linear. Multiple correlations of the independent variables that is government expenditure, taxes and inflation and the dependent variable that is economic growth as measured by GDP showed a positive relationship. The regression results showed that taxes and government expenditure increase the level of GDP of Kenya. The results also showed that different levels of inflation affect GDP in different ways. Some levels of inflation increase GDP whereas some levels of inflation decrease GDP. The conclusion of the study is that there is a linear relationship between taxes, inflation, government expenditure and economic growth. The main recommendation is for the policy makers to ensure optimal combination of taxes, inflation, and expenditure that achieves maximum economic growth.

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ABBREVIATIONS

BVR-Biometric Voter Registration

GDP-Gross Domestic Product

GNP-Gross National Product

IEBC-Independent Electoral and Boundaries Commission

OECD-Organization for Economic Co-operation and Development

SRC-Salaries and Remuneration Commission

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Economic growth mainly refers to the increase in a country's total output. It is the increase in production and consumption of goods and services. This can be measured using the gross domestic product (GDP), or gross national product (GNP).The main difference between GDP and GNP is that GDP only focuses on output that is strictly derived from within the country, while GNP includes output derived from sources external to the country. Public expenditure is the amount of money that the government spends to provide public goods and services. This includes provision of education, health, security services, transport and infrastructure and also recurrent expenditures which are mainly salaries and wages and other operating expenses (Stigliz, 1988).

Desired public expenditure programs can be undone by macroeconomic effects such as fiscal policies, monetary policies, and exchange rate management. Macroeconomic policies do affect the achievement of economic development. Kenya's economic growth from 1965 to 1980 compared favorably with growth in other low income countries and sub-Saharan Africa as a whole. Annual GDP grew at 6.8 percent, compared to 4.2 per cent for sub-Saharan Africa and 4.8 percent for low income countries other than India and Kenya (Olugbenga, 2007).

Over the same period, inflation in Kenya averaged 7.2 percent compared to 11.4 percent for sub-Saharan Africa. Real per capita GDP slowed to 0.4 percent from 1980 to 1990 and inflation increased to 9.2 percent. Thus Kenya's overall growth and inflation

performance was slightly better than average for the region through 1991 (Baghestani and McNown, 1994).

Trade liberalization and openness are advocated as a key prescription to obtain a high economic growth. Trade liberalization which refers to the removal of tariff and non tariff barriers in International trade transactions is one component of an open economy. Kenya begun opening up its economy through trade liberalization and price decontrols in 1987.However liberalization reached its peak between 1993-1994.This changes in policy regime had a significant impact on Kenya's international trade. The reforms were mainly spearheaded by the World Bank and the International Monetary fund through various structural adjustment programs (Africa infrastructure country diagnostic report 2010).

1.1.1 Government Expenditure, Taxes and Inflation

Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenues are treated as negative revenue. The major purpose of tax revenue is to finance government expenditure whether capital or recurrent expenditures (Akpan, 2005).

Inflation is the increase of general prices of goods and services. Due to inflation the currency of a country becomes weak and hence the government spends more to provide goods and services. As a result the countries revenue base may increase and more taxes

collected, but its economic development is negatively affected. The purchasing power of the country's currency is highly affected by inflation (Kneller et al, 1999).

Government Expenditure is the amount of resources spent by a particular government to finance all its operations so as to provide public goods. Oyinlola (1993) observed that the size of government expenditure and its impact on economic growth have emerged as a major fiscal management issue facing economies in transition. Singh and Sahini (1984) has urged that a large and growing government is not conducive to better economic performance .For decades public expenditures have been expanding in Kenya, as in any other country of the world.

Akpan (2005) opines that the observed growth in public spending appears to apply to most countries regardless of their level of economic development. Over the years, increases in the finances of government have led to a number of theoretical and empirical investigations of the sources of such increases. Researchers have particularly questioned whether increases in the size of federal budget tend to be initiated by changes in expenditure followed by revenues adjustments or by the reverse sequence or both (Baghestani and Mcnown, 1994., Akpan, 2005).

A growing government is contrary to a government's economic interest because the various methods of financing government such as taxes, borrowing and printing money have harmful effects. Government spending by its very nature is often economically destructive regardless of how it is financed (Kneller et al, 1999).

In 1930, John Maynard Keynes argued that government's spending – particularly increase in government spending boosted growth by injecting purchasing power in the economy. According to Keynes (1936), government could reverse economic downtown by borrowing money from the private sector and then returning the money to the private sector through various spending programs. This is known as the pump priming concept. This concept however does not mean that the government should be big. Keynesians, asserts that government spending – especially deficit spending could provide short term stimulus to help end a recession or a depression. Keynesians even argued that policy makers should be prepared to reduce government spending once the economy recovered in order to prevent inflation, which would result to too much economic growth.

The Keynesian theory was very influential and dominated public policy from 1930-1970's .The theory has since fallen out of favor but it still influences policy decisions and discussions particularly on whether or not changes in government spending have transitory economic effects. Some law makers use Keynesian analysis to argue that higher or lower levels of government spending will stimulate or dampen economic growth.

1.1.2 Economic Growth

Economic growth is the increase in a country's total production and consumption of goods and services. This can be established using GDP or GNP.

The definition of GDP is based on the total market value of all final goods and services produced within the country in a given period of time usually one year. The evaluation

process also involves the sum of all final commodities produced within a country in a given period of time expressed in monetary terms. GDP is hence computed by adding up consumption, investments, government spending and net exports (Peter, 2003).

A country that has high levels of economic growth has got a lot to show for it. Infrastructures in such a country are well established even in the rural areas and not only concentrated in the urban areas. Education is quality and it is usually affordable to all the citizens. The health sector is well funded and equipped to cater for the health needs of its citizens. The standards of living for its citizens are greatly improved and basic commodities are affordable (African diagnostic country report 2011).

In the world's, some of the country's that are seen as having high rates of economic growth include the United States of America and in Africa South Africa is considered to be performing well.

For a developing economy to break the cycle of poverty, economic growth for that particular economy must be sustained. Countries usually pursue fiscal policies to achieve accelerated economic growth. Fiscal policy refers to the use of fiscal instruments such as taxation and spending to influence the working of the economic system in order to maximize economic welfare with the overriding objective of promoting the long term growth of the economy (Tanzi, 1994).

1.1.3 Relationship between Government Expenditure, Taxes, Inflation and Economic Growth.

Governments' need finances because of their roles in the society. For a government to provide all the public goods, it requires finances which are obtained mainly through taxes, grants and loans (Tanzi, 1994). Governments depend more on taxes to finance their operations and often borrow and get grants to finance their budget deficits. Hence the key

factor that determines the level of government expenditure is taxes. Inflation on the other hand determines the value for money that a government will achieve out of its expenditures.

Higher government expenditure may however slow down overall performance of the economy (Barro., Salai-Martin, 1992). In an attempt to finance rising expenditure, government may increase taxes and or borrowing. Higher income taxes discourage individuals from working for long hours or even searching for jobs (Ladau, 1986).This in turn reduces income and aggregate demand. Similarly higher profit tax increases the cost of production and reduces investment expenditure as well as profitability of firms .Also if the government increases borrowing to finance its expenditure, it will compete (Crowd out) away the private sector, hence reducing private investment (Engen et al, 1992).

One of the most macroeconomic objectives of any country is to sustain high economic growth with low inflation (Liu et al, 2008).Inflation imposes negative externalities on the economy when it interferes with the economies efficiency. It may also reduce a countrie's

international competitiveness, by making its exports relatively more expensive than its imports thus impacting on the balance of payments (Koiman et al, 2007).Individually taxes, inflation and government expenditure do affect economic growth. However taxes and inflation affects the level of government expenditure which eventually affects economic growth (Landau, 1986).

1.1.4 The Kenyan Economy

At independence, Kenya started with a lower share of total government expenditure and government consumption in GDP than the average for the region as a whole. Until 1980, the growth rate of the share of national spending in national output was significantly higher for Kenya than the average for the region. In 1980, total government expenditure for Kenya was 31 percent of GDP about equal to the average for all of Sub-Saharan Africa, while government spending was 29.8 per cent of GDP for Kenya and 22.7 percent for Sub-Saharan Africa (Africa infrastructure country diagnostic report 2010).

Since 1980, the pattern changed. The collapse of the coffee boom in 1978 followed by the recession in the industrial countries and the debt crises in the early 1980s led to reduced economic growth and a reduction in the growth rate of the share of government in output. As part of its structural adjustment programs in 1987, Kenya undertook a comprehensive reform of its tax policies. These led to a successful broadening of the tax base and an increase in compliance rates, along with an overall effort to rationalize the tax structures and reduce subsidies and trade taxes. The end result was increase in revenues, but the share of government spending appeared to rise along with revenues.

Government expenditure increased from 24.3 to 27.9 percent from 1986-1987.This suggests that there could be a possible relationship between government consumption spending and government revenue collection (Africa infrastructure country diagnostic report 2010).

According to SRC, the public service wage bill stood at 9% of the GDP in 1990 but reduced to 7% following massive retrenchment under the IMF and WB spearheaded structural adjustment program. Kenya must consistently invest Kshs 320 billion or about 20% on infrastructural development to attain the status of a middle level economy (World bank report,1991).However the budget estimates for the year 2012-2013 indicates that the government intended to spend Ksh.400 billion on development, education and health compared to Ksh.447 billion in the last financial year 2011-2012 which amount to 32% of total spending .Spending this amount would push growth close to 10% mark set under the vision 2030 master plan. Kenya's per capita growth rate can be increased by three percentage points over the next decade, if infrastructure financing is increased to the average of middle income country (Africa infrastructure country diagnostic report 2010).

1.2 Problem Statement

Examining the relationship between government revenues and expenditures, expenditures and economic growth is a fundamental step in understanding the behavior of Kenyan public expenditure and the economy. A good knowledge of the relationship between government expenditure and economic growth measured by GDP is key to obtaining a

benchmark against which to evaluate the instance of expenditure policy and of overall fiscal policy.

The Output of an economy is measured by GDP adjusted for inflation to get the real GDP. The components of GDP include; Consumption, Investments, Government expenditure, and Net Exports (Exports minus Imports).The sum of these variables gives the GDP of the economy. When the proportion of public expenditures as a percentage of

GDP is very high, the proportion of Investments reduces and hence the overall growth rate reduces. Also, increase in public expenditures results to imposition of higher taxes. This leads to low morale among government employees. It also discourages both domestic and foreign investors because the investment climate is not conducive in an economy with discretionary taxes (Abdullah, 2000).

The other very harmful effect is that more public expenditures results to more external borrowing if the taxes imposed are not enough to finance all the government expenditure. The end result is that the public debt keeps on growing, and the government may result to more borrowing to pay off current debts which results to a vicious cycle of debts (Abu-Bader et al, 2003)

It is also very important to understand the relationship between public expenditures and economic growth, and more so whether there is a linear relationship, because this can be used to predict future parameters of the dependent variable given a certain level of the independent variable. This aspect of prediction can be used to put controls on the levels

of the dependent variable which might have a negative effect on the independent variables.

Economic theory does not automatically generate strong conclusions about the impact of government outlays on economic performance .Indeed almost every economist would agree that there are circumstances in which lower levels of government spending would enhance economic growth and other circumstances in which higher levels of government spending would be desirable .However some government spending is necessary for the

successful operation of the rule of law. It is very prudent to know the levels of public expenditure that would not compromise economic growth. This is the optimal level of public expenditure that will result to optimal economic growth. This study therefore sought to answer the question;

Does the level of public expenditure, taxes and inflation affect economic growth?

1.3 Objectives of the Study

1. To establish the relationship between government expenditure and economic growth in Kenya.
2. To establish the effect of government revenue in form of taxes on economic growth in Kenya.
3. To establish the effect of Inflation on Economic Growth in Kenya.

1.4 Value of the Study

The results of the study will benefit the following;

- **The Executive arm of Government.** Being the arm of government that makes laws official, the executive more so the president, after understanding the effects of public spending on economic growth will sign into law only those bills that are aimed at achieving the optimal economic growth, by controlling recurrent public expenditures and allocating more funds to capital expenditures and expenditures in certain sectors like education sector which spurs economic growth.
- **The Legislative arm of Government.** The results of the study will provide an insight to the legislative arm of government which is mandated to make laws. This arm of government will make laws relating to economic growth plans such as vision 2030 master plan using facts and statistics rather than making laws that will benefit individuals and not the country in general. The present legislative arm of government in Kenya has already angered many Kenyans as they ask for higher salaries contrary to the recommendations of the salaries and remuneration commission. The SRC which is mandated with setting the salaries of state officers reduced the salaries of the executive and legislative arms of government due to the rising wage bill which is negatively affecting the economic growth of the country. Results of the study will clearly depict to the law makers the consequences of having huge public expenditures that do not support development and economic growth.
- **Finance Managers and Accountants in government entities.** These are the key people who approve any expenditure in their respective departments, and also

prepare annual financial estimates in form of budgets. Having understood the effects of non developmental expenditures, they will come up with and implement cost reduction strategies on recurrent expenditure without compromising on efficiency and effectiveness.

- **Procurement Officers.** These are the people entrusted with procuring goods and services for the government and its departments. Government procurement has always been faced with challenges especially pricing challenges where suppliers supply to the government at very high costs compared to the prevailing market rates of particular goods and services. Having understood the effects of non developmental expenditure, procurement officers will be compelled to procure goods and services more competitively and also carry out market price surveys before procuring, in order to save the government losses in revenue due to purchase of overpriced commodities. A good example is the recent scenario where the Independent Electoral and Boundaries Commission (IEBC) procured BVR kits at a cost of Kshs.9 billion whereas the kits ought to cost Kshs.3.5 billion; hence the government lost 5.5 billion which could be used to build almost 10,000 classrooms in rural areas.

CHAPTER 2: LITRATURE REVIEW

2.1 Introduction

This chapter provides a discussion on literature that seeks to understand the relationship between government expenditure and economic growth. There are two main theories that try to explain this relationship. These theories are the Wagner's law and the Keynesian theory. Most empirical studies use time series data and causality relationships to try and understand the long run relationship between government expenditure and economic growth.

This chapter will examine whether any similar study on the long run relationship between economic growth and government expenditure has been undertaken. This study aims at reviewing existing empirical studies on the movement of the main variables which is government expenditure and economic growth and other variables such as taxation and inflation and how they relate to government expenditure and economic growth.

This study will then apply the techniques used in the empirical studies to investigate the long run relationship between economic growth and government expenditure in Kenya since 1990, when trade was fully liberalized. Also the direction of causality between the variables will also be investigated.

2.2 Theoretical Literature review

2.2.1 Wagner's approach of government expenditure and economic growth

The hypothesis that there is a relationship between economic growth and government expenditure is supported in the demand side view .The demand side theory advocates active intervention of government in the economy through government expenditure and money supply in order to stimulate the demand for goods and services and ensure economic growth and stability .This view however contradicts with the supply side approach. In the supply side approach of public finance, government expenditure involves bureaucratic waste and is considered as a distortion to economic growth through inflation that it causes if the resources are not directed to infrastructure creation and investment (Buchanan and Tullock, 1962).

Another demand side approach which is considered in this study is that of Wagner's law. According to Tanzi (1994), Wagner's law predicts and advocates for the growth of government expenditure (as a share of national income) on social services and transfers on infrastructure and on range of economic services. This hypothesis stipulates that there is a tendency by the fiscal authorities to increase the level of public spending as the level of output is expanding .The increase in government expenditure is justified by the role that governments ought to play in the society.

According to Bose et al (2007) the size of government growth has an effect on industrialization. In other words, the richer a society becomes the more the government spends in order to alleviate social and industrial stress.

Mo (2007) states that the interpretation of Wagner's law should be comprehensive in the sense that government expenditure, which must include public enterprises is considered as a key element to stimulate a measure of government control on the economy which is at a stage of infancy.

Stiglitz (1988) argues that governments need finances because of their role in the society. A government performs many roles in the society. One it provides a legal and institutional framework in which corporate and private individuals can carry out economic activities .This is mainly through coming up with laws that regulate the way economic and social activities are carried out. It is involved in providing a favorable and conducive environment in which property rights and fair competition is guaranteed. This means that a government will continually require resources to maintain law and order.

Another role of the government is the provision of social activities. Hence the government has health, sports education recreation transport among others. The other role of a government is to provide for the purchase of goods and services that support its different functions such as defense, police, fire, protection, environmental conservation among others. The other role of the government is to intervene in the economy in order to correct the inequalities caused by the market systems and alleviate the phenomenon of poverty. For this purpose, the government can redistribute income and wealth through the expenditure side of the government.

Therefore according to Wagner's law increase in government expenditure is explained by the fact that the government wants to maximize its utility functions which consists of

public service delivery. The law suggests that besides a unidirectional causality there exist equilibrium between expenditures and economic growth.

2.2.2 Keynesian approach of government expenditure and economic growth

In the Keynesian theory, government is considered as a tool that fiscal authorities can use in order to influence economic activity. Barro (1990) observed that government expenditure is generally associated with higher levels of taxation. If there is an excessive involvement of the government in economic activity through government expenditure and higher taxation, this can result in distortion of economic incentives such as incentives to save and invest incentives for innovation and enterprises and hence retard the process of economic growth and development.

Financial analysts and expert main concern should be to understand how government expenditure affects the economy. This is also something that should be well understood by budget preparation and implementation officials (Barro, 1991)

The Keynesian hypothesis argues that government expenditure can help improve the level of output of the economy. For instance, to correct the short term cyclical fluctuations in aggregate expenditure, government can use government expenditure (Singh and Sahni, 1984).

Ram (1986) argues that government expenditure can help improve the level of productive investment, hence economic growth and development can be secured. Thus government expenditure has a positive impact on economic growth.

A government mainly performs two functions protection (security) and provision of certain public goods (Abdullah., Al-Yousif, 2000).The protection function involves the creation and enforcement of the rule of law .This helps to minimize risks of criminality, protect life and property and the nation from external regression .Under the provision of public goods are defense, roads, education, health and power among others. Some scholars' argue that increase in government expenditure on social economic and physical infrastructure encourages economic growth. E.g. increase in government expenditure on health and education raises labor productivity and increases the growth of national output. Similarly expenditure on roads, communication and power reduces production costs and increases private sector investments and profitability of firms thus fostering economic growth (Cooray, 2009). Hence the expansion of government expenditure contributes positively to economic growth (Ranjan., Sharma, 2008).

Higher government expenditure may however slow down overall performance of the economy (Barro., Salai-Martin, 1992). In an attempt to finance rising expenditure, government may increase taxes and or borrowing. Higher income taxes discourage individuals from working for long hours or even searching for jobs (Ladau, 1986).This in turn reduces income and aggregate demand. Similarly higher profit tax increases the cost of production and reduces investment expenditure as well as profitability of firms .Also if

the government increases borrowing to finance its expenditure, it will compete (Crowd out) away the private sector, hence reducing private investment (Engen et al, 1992).

2.3 Empirical Literature Review

Some studies use aggregated data of government expenditure to test either the Wagner's law or the Keynesian stance while others use disaggregated data in order to get an insight on the long run relationship and the direction of causality between individual components of government expenditure and economic growth. This empirical literature will look at studies that have been done in various economies to establish the causality relationship between government expenditure and economic growth.

Olugbenga, Owoye (2007) investigated the relationship between government expenditure and economic growth for a group of 30 OECD countries during the period 1970-2005.They used simple linear regression and correlation analysis to analyze and to establish whether there is any linear relationship between government expenditure and economic growth. They used the following formulae to perform the correlation analysis;

$$r = \frac{(n\sum xy - \sum x\sum y)}{\sqrt{[n\sum x2 - (\sum x)2][n\sum y2 - (\sum y)2]}}$$

Where r = correlation coefficient

n = no of years

y = economic growth

x = government expenditure

$\sum$ = summation sign

$\sqrt{\ }$ = square root sign

For linear regression, they established a linear relationship between the variables using the basic equation for a line, which is;

$$y = a + bx$$

Where y = Economic growth

a = constant

b = slope/gradient of the line

x = Government expenditure

They then used the following formulae to establish the values of a and b.

$$a = \frac{\sum y - b\sum x}{n}$$

$$b = \frac{n\sum xy - \sum x\sum y}{n\sum x2 - (\sum x2)}$$

These formulas were used to identify the line of best fit between the variables. Their regression results showed the existence of a long run relationship between the two

variables. In addition, they observed a unidirectional causality from the government expenditure to growth for sixteen of the countries, thus supporting the Keynesian hypothesis. However, they observed that causality runs from economic growth to government expenditure in ten out of the thirty countries confirming the Wagner's law.

They finally found the existence of a feedback relationship between government expenditure and economic growth for a group of four countries.

There are several factors that determine the economic growth of a country. Based on the measurement of economic growth using GDP, the factors that influence economic growth are consumption, government spending, imports, exports and investments. These factors should be adjusted for taxes and inflation so as to get the real GDP. This means that that a countries GDP is highly affected by taxes and inflation.

2.3.1 Taxes, Public Expenditure and Economic Growth

Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenues are treated as negative revenue. The major purpose of tax revenue is to finance government expenditure whether capital or recurrent expenditures. Proponents of government intervention in economic activity maintain that such intervention can spur long term growth. The nature of tax regime can foster or harm economic growth. A

regime that causes distortions to private agent's investments can retard investments and growth .The same applies with the nature of government expenditure, excessive spending on consumption at the expense of investments is likely to deter growth and vice versa. Hence government activity sometimes produces misallocation of resources and impedes the growth of national output (Folster, 2001).

In Kenya, government expenditure has continued to rise due to increased demand for public utilities like roads, communication, power, education and health. In the Keynesian Model, increase in government expenditure leads to higher economic growth, especially increase in government expenditure on infrastructure. However, the neo-classical growth model argues that government fiscal policy does not have any effect on the growth of national output. Still it has been argued that government fiscal policies help to improve failures that may arise from market inefficiencies (Devarajan et al, 1996).

Dar Atul, Amirkhalkhali (2002) emphasizes that government activity influences the direction of economic growth .They pointed out that in endogenous growth models, fiscal policy is very crucial in predicting future economic growth. Kenya has had a mixed economic performance since independence and it would be important to know the role the fiscal policies have played.

Mitchell (2005) investigated the relationship between government expenditure and economic growth for a group of 30 countries during the period 1980-2005.The regression

results showed the existence of a long run relationship between government expenditure and economic growth. In addition, the authors observed a unidirectional causality form the government expenditure to growth for 16 out of the countries, thus supporting the Keynesian hypothesis .However causality runs from economic growth to government expenditures in 10 out of the 30 countries confirming the Wagner law. They finally found the existence of feedback relationship between government expenditure, tax and economic growth for a group of four countries.

Landau (1983) used multivariate co-integration and variance decomposition approach to examine the causal relationship between government expenditures, taxes and economic growth for Egypt, Israel and Syria. In the multi-variate framework, the authors observed a directional (feedback) and long run negative relationships between government spending as a result of increased tax collection and economic growth. They also found out that military burden has a negative impact on economic growth in all the countries. However military expenditures have a positive effect on economic growth for both Israel and Egypt.

Devarajan, Swaroop (1996) studied the relationship between the composition of government expenditure and economic growth for a group of developing countries .The regression results illustrated that capital expenditure has a significant association with growth of real GDP per capita.However their study showed that recurrent expenditure has a positive relationship with growth of real GDP per capita.

Bose,Hagues and Osborn(2007) examined the impact of public expenditure by sector on economic growth for a panel of thirty developing countries paying attention to the sensitivity issue arising from initial condition variables while also avoiding the omission bias that may result from ignoring the full implications of the government budget constraint .They found that education is the key sector to which public expenditure should be directed in order to promote economic growth.

Landau (1983) in a study of 104 developed and developing countries finds that government expenditure retards economic growth .The study of Landau confirms that government expenditure has got a negative impact on economic growth. He used time series analysis to establish the trends in government expenditure and economic growth and to establish the behavior of both trends over time.

According to Mo (2007) government expenditure affects economic growth in 3 ways (1) total factor productivity (2) the investment and (3) the aggregate demand for investments. He observed that more government expenditure on investment enhances national productivity and economic growth .Thus governments should re-allocate an important share of public spending towards government investment in order to enhance their national productivity and economic growth.

According to Nijkamp and Poot (2004) who conducted a meta-analysis of past empirical studies of fiscal policy and economic growth and found that in a sample of 41 studies, 29% indicate a negative relationship between fiscal policy and economic growth, 17% a positive relationship and 54% an inconclusive relationship.

2.3.2 Inflation, Public Expenditure and Economic Growth

One of the most macroeconomic objectives of any country is to sustain high economic growth with low inflation (Liu et al, 2008).Inflation imposes negative externalities on the economy when it interferes with the economies efficiency. It may also reduce a country's international competitiveness, by making its exports relatively more expensive than its imports thus impacting on the balance of payments (Koiman et al, 2007).

Inflation is the increase of general prices of goods and services. Due to inflation the currency of a country becomes weak and hence the government spends more to provide goods and services. As a result the countries revenue base may increase and more taxes collected, but its economic development is negatively affected. The purchasing power of the country's currency is highly affected by inflation.

Erkin et al (1988) found evidence that there is a negative link between inflation and economic growth. They argued that inflation results to more public expenditures for lesser goods. They also found out that when inflation is high, the level of investment is low as many people spend money to purchase only basic commodities especially food. However they found out that inflation usually remains stable for a long period of time unless affected by other macroeconomic situations affecting a particular country.

Barro (1991) found a significant negative effect of inflation on economic growth. He found that there exists a non-linear relationship between inflation and economic growth. His main policy message stated that reducing inflation by 1 per cent could raise output by between 0.5 and 2.5 percent.

2.4 Conclusion on Literature Review

The literature review reveals that findings form empirical enquiries on the issue of long term relationship and causality between government expenditure and economic growth

differs for example, the study finds that very little has been done in Kenya to establish how government expenditure has impacted on economic growth and if there is a causality relationship.

This is the major motivation that guides or initiated interest in this study. Furthermore the study finds that the methodological approaches, the issue of business cycles affecting the sample period, the category of data chosen on government expenditure and economic growth explains the disparity in the conclusions.

The objective of this study is to gain insights on the impacts of government expenditure on economic growth. Empirical studies on the relationship between government expenditure and economic growth shows mixed results as depicted in the empirical literature .One of the contributory factors to these varied empirical results is the measure of government spending as proxies for government size such as total government

spending ,government consumption, total government revenue or functional categories of government expenditure among others.

Most of these measures are expressed as percentages of GDP or GNP or as levels of growth rates. Admittedly the choice of a given measure depends on which data series are available to the researcher and given that some measures are better than others, results are bound to differ.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

To access the relationship between government expenditure and Economic growth in Kenya and the causality between these two macroeconomic variables the study adopted the use of linear regression analysis like Olugbenga and Owoye (2007).

Olugbenga and Owoye (2007) investigated the relationship between government expenditure and economic growth in 30 OECD countries for the period between 1970-2005.They used regression analyses to establish the relationship between the variables.

A new aspect was added to the analysis which involved establishing the trend in the variables using time series analysis which was not used by Olugbenga and Owoye (2007)

in carrying out their study. The time series analysis was used establish the trends in government expenditure and economic growth and the behavior of the trends over the period of study. This involved decomposing the data to establish the trend and the seasonal variations, and from the trends, an observation was made depending on the behavior of the trends of both government expenditure and economic growth.

3.2 Research Design

A descriptive approach was adopted in this study. According to Tanzi (1994), descriptive research is the process of collecting data in order to answer questions concerning the current status of the subject in study. The purpose of the descriptive approach is the

description of the state of affairs as it exists at the present .The researcher can only report what has happened or what is happening.

3.3 Population and Sample

The population in this study was the actual government expenditure and average annual GDP growth rate for a period of 20 years since 1990, when trade was liberalized in Kenya. The study also used annual tax revenues for the same period and average annual levels of inflation. Being a case study of Kenya, there was no sampling hence the study focused on the population not a sample size.

3.4 Data Collection

Data was collected for analysis to achieve the objectives of the study. Secondary data was used for the analysis.

Data on GDP growth rates was secondary data. It was derived from the records of data maintained by the Kenya Bureau of Statistics. Data was collected from the Kenya National Bureau of Statistics because it is a semi-autonomous government agency that is responsible for the collection, compilation and dissemination of public data for statistical use, hence the data is reliable. Data was collected by getting the figures from the manual records maintained.

Tax revenues per annum for the period under review were collected from the annual records of revenue maintained by the Kenya Revenue Authority. Data was collected from the authority because it is the agency responsible for collecting taxes and hence it maintains records of tax collected.

Average annual rates of inflation were collected from the records maintained by the Kenya Bureau of Statistics. It is a semi-autonomous government agency that is responsible for the collection, compilation and dissemination of public data for statistical use, hence the data is reliable. Data was collected by getting the figures from the manual records maintained.

3.5 Data Analysis

3.5.1 Regression analysis

The other issue that the study focused on was whether there was possibility of predicting future relationship between the variables. This was done using linear regression. Through linear regression, a function between the dependent and independent variables was developed that was used to predict the future relationship between the variables.

The method that was used for regression analysis is the least squares method.

This is finding the line of best fit by minimizing the total of the squared deviations of the actual observations from the calculated line. The advantage of this method is because it will give equal importance to all the items in the time series, the older and the more recent alike. Multiple regressions were also used. The general form of an equation for a straight line for multiple regression was used which is;

$$\gamma = \alpha + \beta 1x1 + \beta 2x2 + \beta 3x3 + \epsilon$$

Where y = GDP growth rate

α = constant

β= slope/gradient of the line

$x1$= Government Expenditure

$x2$ =Taxes

$x3$ =Inflation

e = Error term

For linear relationships between each of the independent variables and the dependent variable, simple linear regression was used based on the general equation for a straight line which is;

$$y = a + \beta x$$

Where y =Economic growth as measured using GDP growth rate

α = Constant

β = Gradient

x = Government expenditure, taxes, or inflation

Hence to get α & β the following formulas was used;

$$\frac{a = \sum y - \beta \sum x}{n}$$

Where a = constant

y = GDP growth rate

β = slope /gradient

x = Government Expenditure, taxes or inflation

n = no of years

∑ = summation sign

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x2 - (\sum x)2}$$

After getting the values of α and β, predictions or forecasts were made for values of y at different values of value of x.

Test of significance of the individual variables and the overall model, ANOVA analysis was used. Tests of the ANOVA were based on the F ratio at a significance level of 5 percent. Any ration above 5 percent showed that the variables were not significant, while any ratio below 5 percent showed that the variables were significant.

CHAPTER FOUR: FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents data findings from the secondary data collected and interpretations of the data. The secondary data was obtained from the Kenya National Bureau of statistics. Data on Government revenue was obtained from the Kenya Revenue Authority. Data was also verified by comparing with the figures obtained in the World Bank Economic Reports which was in agreement with the data obtained from the other sources.

Data was collected and analyzed using Excel computer program. It was represented using tables and graphs to clearly show the relationships between the variables.

4.2 Findings of the Effect of Government Expenditure, Taxes and Inflation on Economic Growth.

The study examined the extent of the relationship between the independent variables and the dependent variable. More so the study examined the possibility of a linear relationship between the variables. The relationship between the various variables depicted a linear relationship.

Correlation analysis was first done to establish whether in the first place there was a linear relationship or not between each of the independent variables (Taxes, inflation and Public Expenditure) and the dependent variable (economic growth as measured by GDP).All the relationships depicted a positive correlation but not a strong correlation.

However, the multiple correlation coefficients indicated that there is a perfect linear relation between all the independent variables and the dependent variable.

Unlike Landau (1983) the researcher found out that inflation affected economic growth in both a positive and a negative way. Landau (1983) found out that inflation and economic growth were negatively correlated but in this study, the researcher found out that inflation and economic growth were positively related. The model was found to be statistically significant after carrying out ANOVA analysis. There was a positive relationship between inflation and economic growth. On taxes, the researcher found out that the variables were statistically significant. It was also found out that there was a marginal change in economic growth as a result of changes in government revenue. However the marginal change was positive as found out by Landau (1983).

On government expenditure, the variables were found to be statistically significant. The researcher also found a linear relationship between government expenditure and economic growth and found out that there was a marginal change in GDP as a result of a change in expenditure. The change was positive. Combining expenditure, taxes and inflation, the effect on GDP of all of them combined was stronger than the effect of each of the variables individually on GDP. All the variables combined were found out to be statistically significant just like each of the variables on their own. This observation was similar to what was found out by MO (2007).

4.3 Regression Analysis

4.3.1 Regression results of GDP and inflation.

Table 4.3.1.1

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.543495944
R Square	0.295387841
Adjusted R Square	0.258302991
Standard Error	1.970967387
Observations	21

The analysis depicted that there was a linear relationship between inflation and GDP as shown by r. A positive R indicates a positive relationship between the variables. The R of 0.54 showed a strong positive linear relationship. R squared of 0.29 signified that only 29 percent of inflation affected in GDP. The total numbers of observations were 21.

4.3.1.2ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30.94246859	30.94246859	7.965188948	0.010882
Residual	19	73.80953636	3.88471244		
Total	20	104.752005			

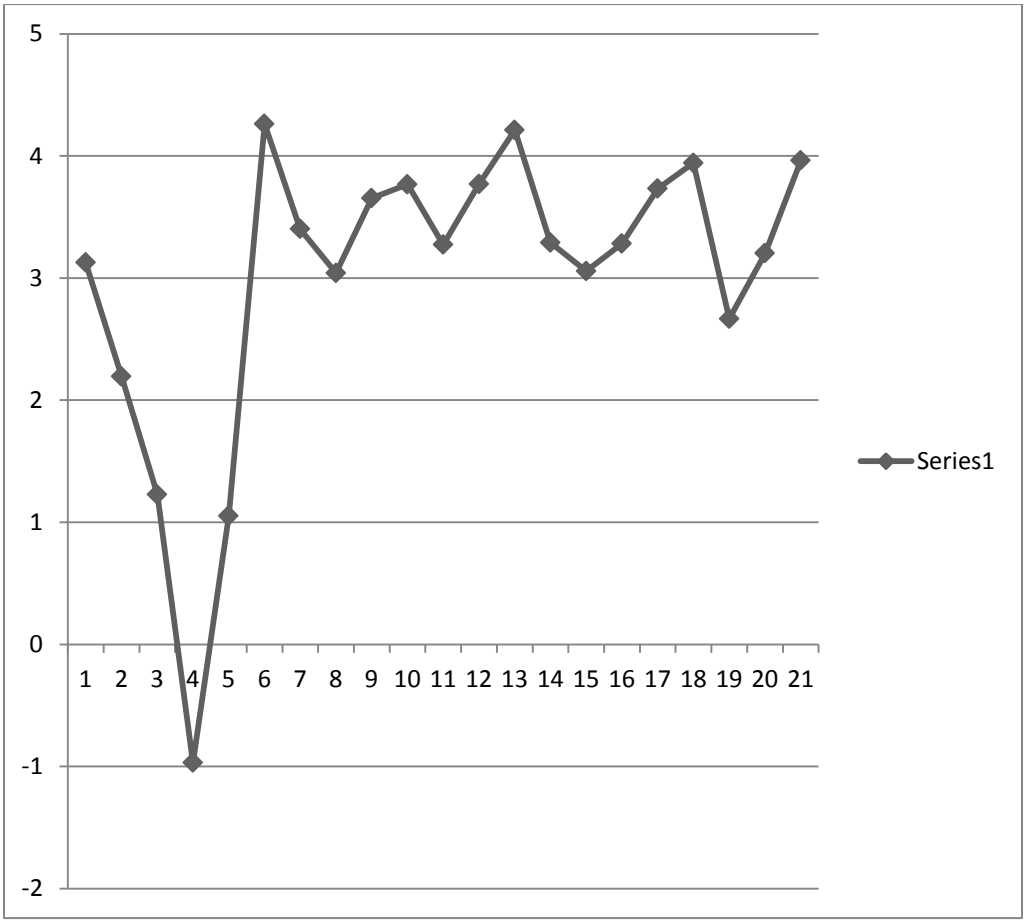
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	4.444121992	0.666710563	6.665744085	2.24857E-06	3.048681
X Variable 1	-0.117752027	0.041722503	-2.822266633	0.010882249	-0.20508

The test of significance showed that the variables were statistically significant. The F statistics of 7.96 and a significance F of 0.01 was less than 0.05 showing that the variables were statistically significant. The intercept of 4.444 means that at an inflation level of 0, economic growth would be 4.444.The slope of the equation is -0.1177 meaning that a change in one unit of inflation would reduce GDP by 0.1177 units.

Hence the model for the relationship can be rewritten as follows;

$y = 0.444 - 0.177x$(Where x is inflation).Assuming x is zero then y will be 0.444 as shown.$y = 0.444 - 0.117(0) = 0.444$

Figure 4.3.1.3 GDP at various levels of inflation



Graphical representation shown above indicates GDP levels that would be achieved at various levels of inflation.

4.3.2 Regression results of GDP and Government Revenue in form of Taxes.

Table 4.3.2.1

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.463369954
R Square	0.214711714
Adjusted R Square	0.173380752
Standard Error	2.080745342
Observations	21

The analysis shows that there is a linear relationship between government revenue in form of taxes and economic growth as measured by GDP. R indicates that the correlation between the variables is 0.46 meaning that there is a positive linear relationship. R squared shows that only 21.4 percent of economic growth is attributable to taxes. The total numbers of observations made were 21.

Table4.3.2.2ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	22.49148257	22.49148257	5.194936241	0.034382
Residual	19	82.26052238	4.329501178		
Total	20	104.752005			

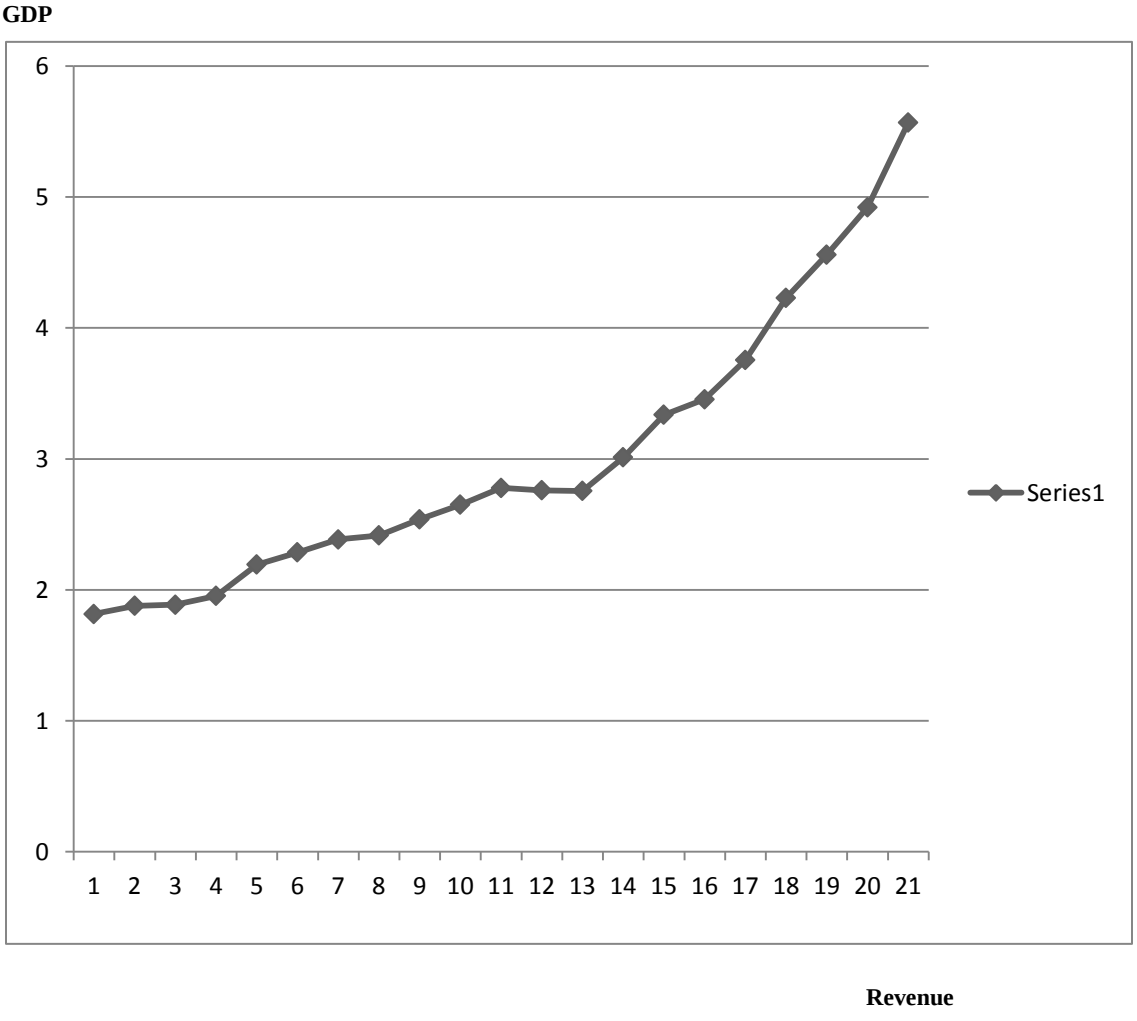
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	1.548707437	0.784335853	1.974546276	0.063034936	-0.09293
X Variable 1	6.76316E-12	2.96729E-12	2.279240277	0.034382335	5.53E-13

The test of significance showed that the variables were statistically significant. The F statistics of 5.19 and a significance F of 0.03 was less than 0.05 showing that the variables were statistically significant. The intercept of 1.549 means that at a tax level of zero, economic growth would be 1.549. The slope of the equation is 6.763 meaning that a change in one unit of taxes would increase GDP by 6.763 units.

Hence the model for the relationship can be rewritten as follows;

$y = 1.549 + 6.763x$(Where x is taxes).Assuming x is zero then y will be 1.549 as shown.$y = 1.549 + 6.763(0) = 1.549$

Figure 4.3.2.3 GDP at various levels of Government Revenue



Graphical representation shown above indicates GDP levels that would be achieved at various levels of government revenue in form of taxes.

4.3.3 Regression results of GDP and Government expenditure

Table 4.3.3.1

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.472257464
R Square	0.223027113
Adjusted R Square	0.182133803
Standard Error	2.069699543
Observations	21

The analysis shows that there is a linear relationship between government expenditure and economic growth. R indicates that the correlation between the variables is 0.47 meaning that there is a positive linear relationship. R squared shows that only 22 percent of economic growth is attributable to government expenditure. The total numbers of observations made were 21.

Table 4.3.3.2

ANOVA

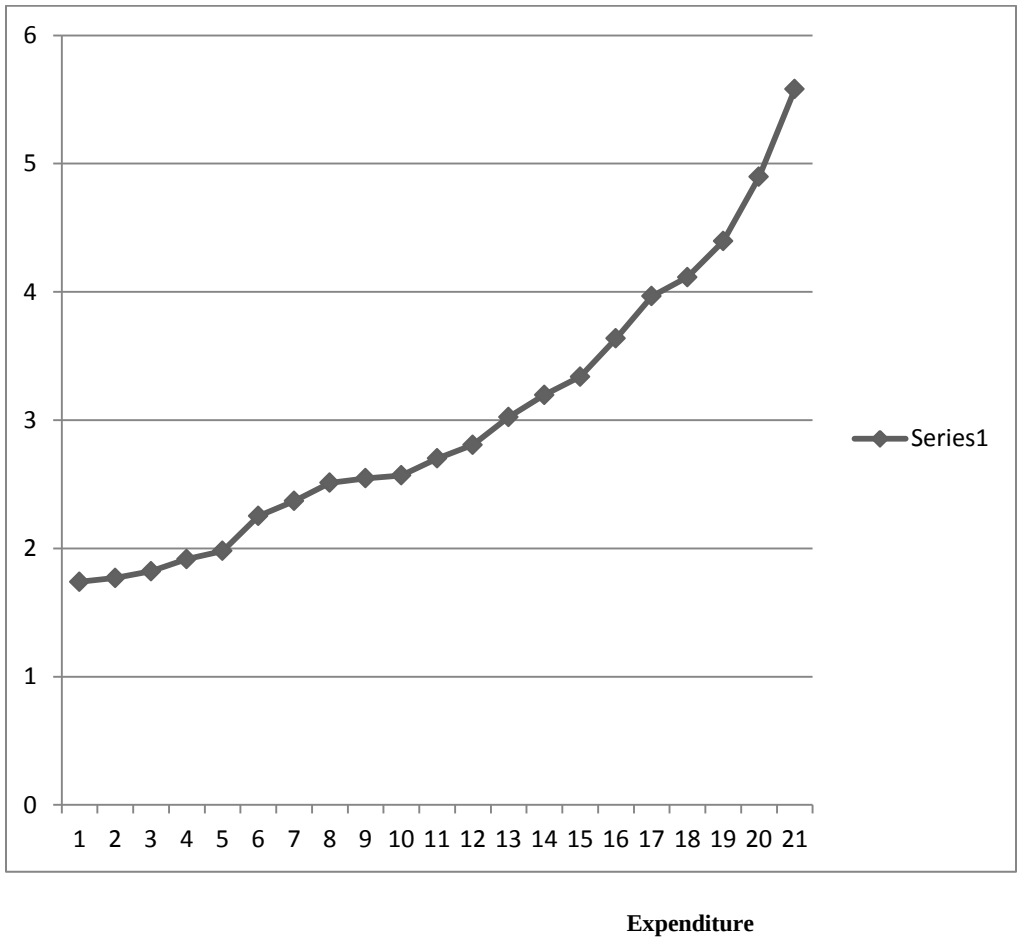
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	23.3625372	23.3625372	5.453877744	0.030644
Residual	19	81.38946775	4.283656198		
Total	20	104.752005			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	1.451047627	0.804694091	1.803228884	0.087235143	-0.2332
X Variable 1	7.66945E-12	3.28406E-12	2.33535388	0.030643562	7.96E-13

The test of significance showed that the variables were statistically significant. The F statistics of 5.45 and a significance F of 0.03 was less than 0.05 showing that the variables were statistically significant. The intercept of 1.45 means that at an expenditure level of zero, economic growth would be 1.45. The slope of the equation was 7.669 meaning that a change in one unit of government expenditure would increase GDP by 7.669 units. Hence the model for the relationship can be rewritten as follows;

$y = 1.45 + 7.669x$(Where x is government expenditure).Assuming x is zero then y will be 1.45 as shown.$y = 1.45 + 7.669(0) = 1.45$

Figure 4.3.3.3: GDP at various levels of Government Expenditure.



Graphical representation shown above indicates GDP levels that would be achieved at various levels of government expenditures.

4.3.4 Multiple Regression results of GDP and Taxes, Inflation and government Expenditure.

Table 4.3.4.1

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.609365886
R Square	0.371326783
Adjusted R Square	0.260384451
Standard Error	1.968199833
Observations	21

The analysis shows that there is a linear relationship between government expenditure, taxes, inflation and economic growth. R indicates that the correlation between the variables is 0.61 meaning that there is a perfect positive linear relationship. R squared shows that 37 percent of economic growth is attributable to government expenditure, taxes and economic growth. The total numbers of observations made were 21.

4.3.4.2ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	38.89722503	12.96574168	3.347025208	0.04383
Residual	17	65.85477992	3.873810584		
Total	20	104.752005			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	3.363237553	1.267497089	2.65344795	0.016720377	0.689052

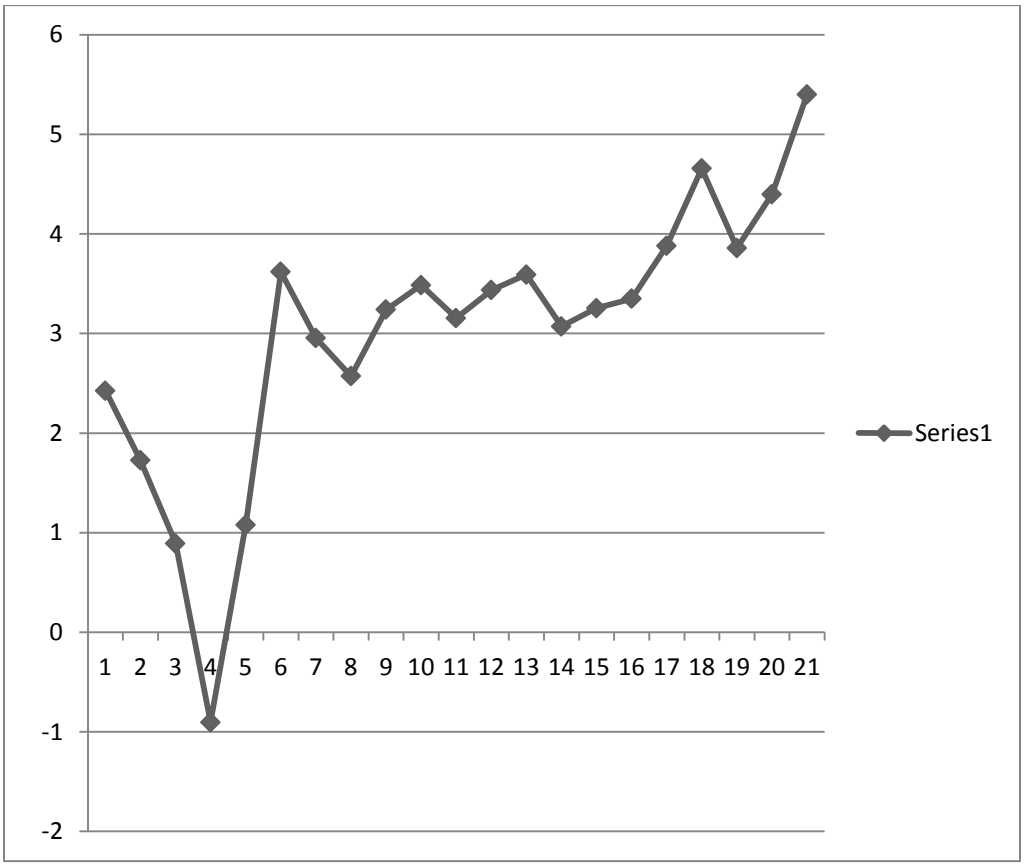
X Variable 1	-0.097107184	0.048885475	-1.986422015	0.063351167	-0.20025
X Variable 2	1.05576E-11	2.55308E-11	0.413525155	0.684391586	-4.3E-11
X Variable 3	-7.13369E-12	2.89406E-11	-0.246493911	0.808251712	-6.8E-11

The test of significance showed that the variables were statistically significant. The F statistics of 3.34 and a significance F of 0.04 was less than 0.05 showing that the variables were statistically significant. The intercept of 3.36 means that at an expenditure, tax and inflation level of zero, economic growth would be 3.36. The slopes of the various variables are 0.097 for inflation, 1.056 for taxes and -7.134 for government expenditure. Hence the model for the relationship can be rewritten as follows;

$y = 3.363 - 0.097x1 + 1.056x2 - 7.133x3$ (Where x1, x2, x3 refers to Inflation, Taxes and Government expenditure respectively).Assuming x1, x2, and x3 is zero then y will be 3.36 as shown.$y = 3.36 - 0.097(0) + 1.056(0) - 7.133(0) = 3.363$

Figure 4.3.4.3: GDP for multiple regressions

GDP



Taxes, Expenditure, Revenue

Graphical representation shown above indicates GDP levels that would be achieved at various levels of government expenditures.

4.4 Summary of Findings and Discussions.

The researcher found out that all the variables individually and in a combined analysis had an effect on economic growth as measured by GDP.

Inflation had a negative relationship as indicated by the correlation between inflation and economic growth. This is similar to the findings by Landau (1983).It was also observed
That for different values of inflation, economic growth would either increase or decrease. The researcher also found out that there are levels of inflation that would push economic growth to negative levels.

From the research and analysis, it was found out that taxes affect economic growth in a positive way. The relationship between taxes and economic growth is linear and always increasing. It was found out that more and more taxes continue to improve the GDP of the country.

Like Ram (1986), the researcher also found out that government expenditure also affects economic growth in a positive way. More and more of public spending results to increased economic growth. Ram (1986) argues that government expenditure can help improve the level of productive investments, hence economic growth and development can be secured. Thus government expenditure has a positive impact on economic growth.

The multiple regression results also show that all the variables combined have got an impact on economic growth. The graphical representation of GDP at various levels of

inflation, taxes and government expenditure shows that at some levels of the variables combined, economic growth decrease whereas at higher levels of the variables combined, economic growth increases. The multiple variables were also found to statistically significant. It was also observed that the relationship of the variables combined in relation to GDP was stronger than the relationship of the variables to economic growth analyzed individually.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the findings of the study are summarized, discussed and conclusions drawn. The chapter also highlights the challenges and the limitations of the study and recommendations and areas considered necessary for further study. The researcher's intention was to investigate the effects of taxes, inflation and public expenditure on economic growth in Kenya as measured by GDP since liberalization of trade. Individual variables were analyzed in relation to GDP and also all variables were analyzed to establish their multiple effects on GDP.

5.2 Summary of findings

This section summarizes the findings obtained from the data analysis. From the study, the researcher found out that Tax, Inflation and Government Expenditure have a linear relationship on economic growth. All of them affect economic growth in a positive way, but inflation affects economic growth both in a positive and a negative way.

Unlike the common believe where the people think that inflation negatively affects economic growth, the researcher found out that inflation affects economic growth in a positive way in the long run and also in a negative way. From the analysis, the researcher found out that very low levels of inflation affect economic growth in a negative way. As inflation increases, GDP also increases up to a maximum and then it begins fluctuation

with higher and higher levels of inflation. The researcher found out that there are some levels of inflation that favor economic growth and there are some levels of inflation that suppress economic growth.29 percent of economic growth is attributable to inflation.

On taxes, the researcher found out that more and more government revenue increases economic growth. From the forecasts the researcher found out that increase in government revenue will continue increasing the economic growth of this country. The study also established that increase in revenue by one unit increases the level of economic growth by a high margin.21.4 percent of economic growth is attributable to government revenue in form of taxes.

Public expenditures also increase the economic growth of the country. The researcher found out that a marginal increase in public expenditure leads to a very significant increase in economic growth as measured by GDP. The growth attributed to economic growth by increase in public expenditure is higher than the growth attributed to economic growth by pubic revenues.22 percent of economic growth is attributable to public expenditure. However the relationship between public expenditure and economic growth is stronger(R=04.7) than the relationship between taxes and economic growth(R=0.46).

The multiple regression of all the variables depicted very positive results. The researcher found out that all the three independent variables together lead to higher economic growth than each of the variables analyzed on its own. The relationship between all variables and economic growth is stronger (R=0.61), stronger than the relationship

between each of the independent variables and economic growth. The researcher also found out that each variable affected economic growth in a positive way but the relationship was not a perfect linear relationship. It can be observed that higher and higher levels of taxes, inflation and government spending will lead to higher levels of economic growth. However it can also be observed that at higher levels of the independent variables, economic growth level keeps on fluctuating, sometimes increasing GDP and sometimes reducing GDP.

5.3 Conclusions of the Study

The findings of the study indicate a healthy relationship between taxes, inflation, public expenditure and economic growth as measured by GDP. An increase in these variables results to an increase in economic growth as measured by GDP, though the level of growth fluctuates at higher levels of taxes, inflation and expenditure.

Further it is clear from the findings of this study that too low levels of inflation result to negative economic growth rates whereas low levels of government expenditure result to low levels of economic growth rates. The researcher can also conclude from the findings that more revenue and higher public expenditures will result to higher economic growth and that there are levels of inflation that results to positive economic growth, however all the variables combined will result to more levels of economic growth rates.

Inflation should be controlled as well as expenditure so as to achieve a level which will bring optimal economic growth and development. More and more revenue will continue

increasing Kenya's GDP. Tax revenue enhancement should bring our level of growth to higher levels.

The overall conclusion is that taxes, Inflation and Government expenditure have got a positive impact on economic growth.

5.4 Limitations of the Study

This researcher experienced various limitations while undertaking the study. It is therefore important to highlight the limitations that the researcher experienced, in order fully understand the implications of the research findings.

The researcher could not get audited government expenditure figures of the financial year ending 2012.Audited financial statements can be obtained once the Auditor General is through with the audit of government entities which at the time the researcher was collecting data, the Auditor General had not completed the audit. The researcher was therefore forced to use unaudited data on expenditure for the financial year 2012.

The Kenya Revenue Authority was not willing to release official amounts of government revenue for the financial year ending 2012 as the authority claimed that the actual figures were still confidential. This authority said was due to the huge amounts of money that that had not been refunded to VAT agents. Hence 2012 revenue amount was based on estimates given by the Kenya Revenue Authority.

Another limitation the researcher found was the sample size. Analyzing data for a period of 20 years may not infer correctly to the population. Data analyzed for more years may be 50 years since Kenya got its independence may be more accurate.

The model used to analyze the data was also a challenge. The model is complicated and use of computer aided softwares was necessary, especially in carrying out multiple regression analysis of the variables.

The other limitations include resource constraints in terms financial resources. An in-depth study was undertaken hence a lot of financial resources were spent to carry out the research.

A lot of time was also spent on data analysis and to carry out the whole research. With more time, the researcher could have analyzed a larger sample to enhance the quality of the research output. The researcher even had to learn how to analyze data using excel which was time consuming and very involving.

However, despite the above limitations, the quality of the data and the validity of the output was not affected in any way.

5.5 Recommendations of the Study

5.5.1 Policy Recommendations

The researcher recommends that various policy issues on taxes, inflation and public expenditure need to be out in place to ensure optimal economic growth is achieved.

The Government should ensure that public expenditure allocations are concentrated on sectors that improve the livelihood of the citizens and hence leading to higher levels of economic growth. This includes allocating more funds to infrastructure development, health and education together with security. The effect is that with issues like those of security addressed, the country will gain investor confidence, leading to more investors in the country and hence increasing our GDP. Education and infrastructural development is also very important in improving our economic growth.

The government through its policy makers should cut down on recurrent expenditures which generally reduce the allocation on capital and development expenditures. This can
be done by demanding a high level of efficiency in the public sector and a high level of accountability by the accounting officers of the different government ministries and government parastatals.

The Kenya Revenue Authority which is mandated to collect revenue should also make policies to ensure optimal revenue collection which contributes positively to the economic growth of the country. This includes identifying the revenue gaps that exist in our taxation system. Furthermore issues of corruption and tax evasion have greatly compromised our revenue collection and they should be properly addressed.

Other revenue collection bodies such as county governments and others that collect Appropriations in Aid and also Government Business Enterprises should enhance their revenue collection so that overall government revenue is increased and hence an increase in economic growth rates.

The Central bank of Kenya should also maintain a healthy level of inflation that contributes to economic growth. As observed from the analysis at higher levels of inflation the economic growth will keep on fluctuating .It is therefore necessary that the rates of inflation are monitored and controlled.

Last but not least I would recommend that wages and allowances be monitored and adjusted to be in line with the required proportion of GDP.The percentage of wages in
relation to the GDP of our country is very high compared to many other third world countries. The salaries paid to legislators are higher than that paid to legislators in other countries which are even more economically stable than Kenya. As a country we have to control the salaries and wages of all state and public officers coupled with doing away with a redundant work force. This will reduce our personnel costs and the savings could be used for investing in development projects which will greatly improve economic growth.

5.5.2 Suggestions for further Research

The aim of this research was to establish the effect of taxes, inflation and government expenditure in Kenya. In the course of the research, the researcher identified areas which could be studied to give a broader insight into what other factors do affect the economic growth rates of our country.

A study should be carried out to establish the relationship between government wage rates and economic growth. With the current situation where every person in government is agitating for a higher pay, there is a need to identify whether there is a linear relationship between the government wage bills and economic growth.

It would also be necessary to carry out a similar study which analyses the different compositions of government expenditure and their relationships with economic growth. This should be a detailed study that does not focus on the aggregated government expenditure but on individual components of government expenditure.

I would also suggest that a study be carried out to establish the effects of general elections on economic growth during every election period since the country gained its independence .This will help identify the trend whether the country does better or poorer during electioneering periods.

The same study should also be carried out but one which uses a bigger sample of time period may be 50 years or more.

The same study should also be carried out for the same period of time but using GDP based on purchasing power parity of consumers.

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APPENDIX 1

GDP, Inflation, Tax Revenue and Government Expenditure for the period 1992 to 2012

Year	GROSS DOMESTIC PRODUCT - CONSTANT PRICES	INFLATION -AVERAGE CONSUMER PRICES	TAX REVENUE	GOVERNMENT EXPENDITURE
1992	4.134	11.2	39,518,000,000	37,606,400,000
1993	1.339	19.104	48,682,000,000	41,475,200,000
1994	-1.08	27.332	49,927,000,000	48,306,800,000
1995	-0.095	45.979	59,840,000,000	60,719,400,000
1996	2.531	28.814	95,350,000,000	69,056,800,000
1997	4.287	1.554	109,031,000,000	104,442,000,000
1998	4.011	8.862	123,729,000,000	119,677,000,000
1999	0.22	11.924	128,127,000,000	138,256,000,000
2000	3.33	6.716	146,509,000,000	142,871,000,000
2001	2.407	5.753	162,898,000,000	145,701,000,000
2002	0.599	9.955	181,924,000,000	162,959,000,000
2003	4.726	5.73	179,064,000,000	176,821,000,000
2004	0.299	1.97	178,434,000,000	205,207,000,000
2005	2.785	9.81	216,290,000,000	227,596,000,000
2006	4.616	11.79	264,322,000,000	246,056,000,000
2007	5.981	9.87	281,940,000,000	285,056,000,000
2008	6.326	6.041	326,185,000,000	327,918,000,000
2009	6.993	4.265	396,386,000,000	347,262,000,000
2010	1.528	15.101	445,167,000,000	383,847,000,000
2011	2.645	10.552	498,637,000,000	449,339,000,000
2012	5.552	4.086	594,198,000,000	538,541,000,000

APPENDIX 11

Regression results for GDP and government expenditure

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.472257464
R Square	0.223027113
Adjusted R Square	0.182133803
Standard Error	2.069699543
Observations	21

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	23.3625372	23.3625372	5.453877744	0.030644
Residual	19	81.38946775	4.283656198		
Total	20	104.752005			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	1.451047627	0.804694091	1.803228884	0.087235143	-0.2332
X Variable 1	7.66945E-12	3.28406E-12	2.33535388	0.030643562	7.96E-13

APPENDIX 111

Regression results for GDP and government revenue

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.463369954
R Square	0.214711714
Adjusted R Square	0.173380752
Standard Error	2.080745342
Observations	21

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	22.49148257	22.49148257	5.194936241	0.034382
Residual	19	82.26052238	4.329501178		
Total	20	104.752005			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	1.548707437	0.784335853	1.974546276	0.063034936	-0.09293
X Variable 1	6.76316E-12	2.96729E-12	2.279240277	0.034382335	5.53E-13

APPENDIX 1V

Regression results for GDP and Inflation

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.543495944
R Square	0.295387841
Adjusted R Square	0.258302991
Standard Error	1.970967387
Observations	21

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	30.94246859	30.94246859	7.965188948	0.010882
Residual	19	73.80953636	3.88471244		
Total	20	104.752005			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	4.444121992	0.666710563	6.665744085	2.24857E-06	3.048681
X Variable 1	-0.117752027	0.041722503	-2.822266633	0.010882249	-0.20508

APPENDIX V

Multiple regressions

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.609365886
R Square	0.371326783
Adjusted R Square	0.260384451
Standard Error	1.968199833
Observations	21

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	3	38.89722503	12.96574168	3.347025208	0.04383
Residual	17	65.85477992	3.873810584		
Total	20	104.752005			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	3.363237553	1.267497089	2.65344795	0.016720377	0.689052
X Variable 1	-0.097107184	0.048885475	-1.986422015	0.063351167	-0.20025
X Variable 2	1.05576E-11	2.55308E-11	0.413525155	0.684391586	-4.3E-11
X Variable 3	-7.13369E-12	2.89406E-11	-0.246493911	0.808251712	-6.8E-11