

# The Effect of Taxation on Government Expenditure in Kenya

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## Abstract

Rapid increase in public spending, rather than poor performance of tax revenue has been identified as the major cause of persistence fiscal deficits in many developing countries. Kenya is seen to have better strategies of mobilizing domestic resources for development than most other developing countries. The imbalance between government revenue and its expenditure results in large and persistent fiscal deficits. Revenue instability can complicate fiscal management especially if expenditures are inflexible downwards and the options open to policy makers are limited. The objective of the study was to establish the effect of taxation on government expenditure in Kenya. Secondary data was obtained from the National Bureau of Statistics and was analyzed using descriptive statistics and regression model. The study reveals that government revenue influences government expenditure significantly. It was therefore recommended that government needs to reduce its recurrent expenditures, increase its tax revenues or borrow more to be able to pay for its recurrent as well as non-recurrent expenditures.

**Key words:** Taxation, Government Revenue, Government Expenditure, Recurrent Expenditures, Development Expenditures, Budget Deficits.

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## INTRODUCTION

Confronted with acute resource gaps which have over time impeded economic growth, developing countries have to play an important role in promoting economic development particularly by mobilizing their own internal resources. The implication is that effective tax policies have to be implemented which should be well designed if adequate resources have to be mobilized. Many developing countries are rarely able to raise sufficient revenues to enable them finance all their activities. This implies that most of these countries find themselves with huge budget deficits. Buchanan and Wagner (1977) posits that the rapid increase in government spending is caused by large deficits the argument being that the deficits are there anyway.

The hypotheses for taxation and government spending are the tax-spend hypothesis and the spend-tax hypothesis. The tax-spend hypothesis contends that government revenues have a positive effect on government expenditures and conversely, reductions in government revenues reduces government expenditures. The spend-tax hypothesis on the other hand argues that the political system somehow determines how much to spend and then makes the adjustments in tax policy and revenue sources to finance the government spending (Abdul & Muzafar, 2002; Wahid, 2008)

Economic growth increases the taxable capacity of a country and enables a larger share of the private sector's resources to be ceded to the government as taxes to provide public goods and services. Many countries therefore depend mainly on taxation as a means of generating the required resources to meet their expenditure requirements. These countries will likely find themselves in growing fiscal imbalances when their revenue productivity falls below their expenditures. The efficacy of fiscal adjustment to accomplish fiscal obligations depends on the tax base or capacity relative to the expenditure requirements of the public sector. To achieve high fiscal performance, the various facets of revenue and expenditure estimates must be meticulously systematized and minutely analyzed within the general macroeconomic framework. Proper analysis and adequate harmony is necessary to enable revenue and expenditure policies formulated to produce high fiscal performance (Kusi, 1998). Osoro (1997) observes that low tax collection causes high and persistent deficits and maintains that such high deficits would be eliminated or substantially reduced by designing policies that would raise more tax revenues or improve tax collection. The author observed that government efforts to raise taxes will fail to reduce deficits if they do not go hand in hand with measures to reduce public spending.

As countries embark on tax reform programs, they should also put measures in place to tame inflation such that benefits accruing from tax reforms are not eroded by high inflationary pressures while ensuring that government expenditures are kept under control to avoid eroding the benefits derived accruing from increased tax revenue (Farhadian-Lorie and Katz, 1990). Ordinarily, a country will not benefit significantly from high tax revenues if expenditures of government are not properly managed. In a number of countries government's ability to raise revenues or secure financing has been severely restricted by poor economic performance. (Mutambi, 2001; Kusi and Mc Grath, 1998). Saede (1990) observe that in the presence of capital inflows, the overall level of activity in the economy is artificially and temporarily increased through the foreign borrowing, and so is the aggregate tax base. When Governments find themselves running huge budget deficits, they might be forced to embark on one or more of the following approaches. Government could opt for discretionary tax measures (DTMS). This option tends to raise tax burden and is usually politically unpopular.

Borrowing from the Central Bank fuels inflationary tendencies, whereas borrowing from the public especially through high yielding treasury bills exerts an upward pressure on other interest rates hence impeding private sector borrowing (Siegel, 1979; Saede, 1990).

Many countries undertake tax reforms with the objective of improving the efficiency of tax administration and subsequently increase the amount of tax revenue (Ghura, 1998). Tax reforms are also implemented with the objective of achieving revenue adequacy, economic efficiency, equity and fairness, and simplicity. Administration reforms introduced to address tax administration issues include introduction of a revenue agency such as the Kenya Revenue Authority (KRA) or the Uganda Revenue Authority (URA) to collect taxes. The agency approach is normally expected to increase the responsiveness of Government to the taxpayer in terms of genuine tax structure demands and reforms and also speedier enforcement on tax defaulters (Chipeta, 1998; Kusi & Mc Grath, 1994).

In many economies the world over, accountability and transparency and fiscal discipline in public expenditures takes priority as the main catalysts to economic growth. Several projects and programs in many countries were externally financed and were initially started but with little or no accountability and transparency in their implementation, and quite a number of these projects were either not completed at all or were behind schedule in completion. Virtually all developing countries separate recurrent budget from capital budget and attempt to finance recurrent budget from taxes, with some surplus over this going to the capital budget. The remainder of the capital budget is financed through domestic and or foreign borrowing. With introduction of conditionalities by development partners including requirement for stringent fiscal discipline, donor financing dwindled which called for most developing countries, including Kenya, to embark on Public Expenditure Reform Programmes (Feyzioglu, Swaroop & Zhu, 1999). Several externally financed projects and programs were initiated but with little or no accountability and transparency in their implementation ended as white elephants (Osei, 1998; Devarajan, et. al; 1998).

Garba (1997) observe that federal government expenditure in Nigeria is not autonomous implying that if a part of federal government expenditure is endogenous, the relevance of conventional multiplier analysis to fiscal policy analysis and design becomes doubtful. Additionally, the capacity of the federal government to conduct credible fiscal policy is constrained by the inherent variability of endogenous expenditure. A weak capacity for credible fiscal policy would undermine the credibility of other macroeconomic policies especially if they are as sensitive to fiscal policy as monetary policies. The ramifications imply that a precise conceptualization and specification of federal expenditure reaction functions is indispensable to a potentially effective macroeconomic policy analysis and hence, to the attainment of the basic objectives of macroeconomic policy.

Since independence recurrent expenditure has continued to be a major component of Kenya's budgetary process. Expenditures have persistently exceeded the revenues and both have maintained consistent growth patterns. Prior to the 1973/74 oil crisis, total revenue matched total expenditure. The country started to experience serious budget deficits thereafter calling for external sources of finance (Osei, 1998). In Kenya the budget is an important tool that is used to control Government expenditures. The Kenya Government uses the Medium Term Expenditure Framework (MTEF) for budgeting which focuses on forward budgets. The MTEF is a three-year rolling planning exercise that establishes clear priorities for the allocation of recurrent and development resources (GOK, 2013). In the Policy Framework Paper of 1996, the government stressed on the need to maintain macroeconomic stability and continue with tightened fiscal policy that aims at lowering domestic debt thereby allowing more credit to the private sector and reduction in real interest rates. Studies by Nyoni (1997), Killick (1991) and Corden (1984) observe that foreign aid increases government spending.

It is widely accepted that public sector finances and related policies constitute a central aspect of economic management the quality of which in no small measure influences overall macroeconomic performance as well as the distribution of resources between the public and private sectors. Buchanan and Wagner (1977) argue that fiscal deficits are the cause of rising public spending because they reduce the perceived tax price of publicly provided goods and services, therefore taxpayers respond by increasing their demand for such goods and services. Among the modes of financing government spending include; taxation, borrowing from the public, borrowing from the banking system (credit creation), loans and grants. The costs associated with each of the alternative modes of financing determine how much should be from taxation and how much should be from other sources (Osoro, 1997).

Throughout the developing world interest obligations incurred by governments prior to the 1980s have had to be met by either government raising more revenues, by reducing expenditures, or by a combination of the two. Because of the relatively low incomes in developing countries, it is difficult to raise sufficient revenues to finance Government Expenditures (Cornia & Stewart, 1991). Hoddinott, Bates and Steedman (1994) observe that governments cut capital spending more than recurrent spending, the argument being that it is easier to put off spending that helps to meet future needs than make current expenditures that have both immediate impact in terms of public services and in terms of employment. Ogbu and Gallagher (1991) observe that government cut on expenditures on supplies and maintenance in a discriminative manner while Tanzi (1991)

notes that defence spending is more likely to be 'protected' while social services such as health and education, often are reduced in terms of budget share (Manage and Marlow, 1986; Von Furstenberg et. al., 1986).

Expenditure cuts are politically unpopular and detrimental to the development process while raising taxes is politically unpopular and worsens the unemployment problem. Most developing countries therefore seek to balance at least the current budget, and are strongly pressured by development partners to do so particularly if they are having difficulties in meeting their foreign debt obligations. The real dilemma of governments in these countries is the choice between economic growth accompanied by deficit, growing debt obligation and possible inflation, and measures to reduce deficit that will slow growth and particularly harm the low-income group (Singh & Sahni, 1984). The high and persistence deficits in many countries is an outcome of a combination of poor revenue performance and rising government spending (Osoro, 1997).

Mutambi (2001) used annual data from 1987/88-1999/2000 to analyze the productivity of tax revenue in Uganda by computing the elasticity and buoyancy of the overall tax system and found out that Ugandan tax system was productive during the period as evidenced by the elasticity and buoyancy coefficients of greater than one for the overall tax system and each of the major tax categories. The findings further revealed that discretionary tax measures, mainly changes in the rates and improvement in tax administration, played a significant role in increasing tax revenue. The exchange rate, inflation and external financing were found to have a significant impact on tax revenue. The author further observe that the failure of the tax system to generate sufficient revenue to finance government expenditure has resulted into persistence budgetary deficits.

Gallagher (1994) investigated government spending in Africa during the 1980s. This was a period for structural adjustment programmes when stabilization and structural adjustment programmes often resulted in severe reductions of government spending. Even countries that did not implement formal stabilization or structural adjustment programmes, economic hardship often led to declining resource availabilities for government programmes. Regression method was used to model spending behaviour. The findings were that rising interest obligations tended to 'crowd out' other types of spending; capital spending has often been cut more than recurrent spending when overall spending has been tight or declining; wage spending has been 'protected' while spending on supplies has been reduced; and contrary to common belief, military spending has been reduced more than other types of spending. The author observed that despite reductions of expenditure in other functional categories, spending on agriculture was protected.

Osoro (1997) tests the causality between spending and revenue by applying Granger causality tests to Tanzania data. The author further hypothesizes that high deficits lead to increased spending. The findings are that public spending drives public revenue suggesting that one of the causes of the increased tax revenue is rapid growth in public spending. The incremental nature of government spending and the non-enforcement of spending limits necessitates the preparation of mini-budgets and additionally a rapid growth in public spending lead to fiscal deficits.

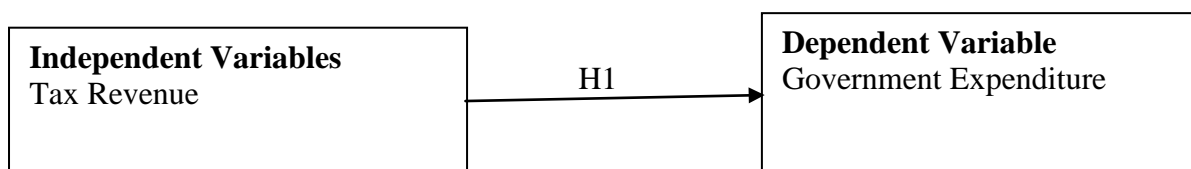
Garba (1997) investigated the broad question of the autonomy of aggregate federal expenditure and its composition using a 'first principles approach' and econometric methods using the budget data for the period 1975-1993 in Nigeria. The information stock on Nigeria's budgeting for the period reveals a federal budget process driven by an external shock sensitive oil revenue to which both federal revenue, expenditure, deficit and borrowing react. Abdul and Muzafar (2002) researched on the causality between government tax revenues and government expenditures in Malaysia using the case of Toda and Yamamoto during 1960 to 1997 and their findings supports the existence of bidirectional causality between the two variables. Wahid (2008) examined the causality link between government revenue and government spending in Turkey by using the Granger-causality test and found out that increase in government expenditure leads to an increase in tax revenues. Maynand and Guy (2009) established the relationship between government expenditure and tax revenue in Barbados using Engle-Granger co-integration models for 1985-2008 and found a unidirectional link between government spending and government revenue.

## 1.2 Statement of the Problem

In Kenya government expenditures are consistently way above its revenues. To mitigate this, the government has either resorted to inflationary financing or additional external financing with the consequent adverse effects on interest rates, the balance of payments and the value of the Kenya shilling. It is argued that fiscal deficits are the root of macroeconomic crisis, inflation, and external indebtedness and trade disequilibrium. Ariyo (1993) observe that the imbalance between government revenue and government expenditure in many countries, more so developing countries tends to result in large fiscal deficits.

The Kenya Government embarked on the Tax Modernization Program in 1986 which was aimed at enlarging the government revenue base in order to enhance the elasticity of the tax system. The Budget Rationalization Program which started in 1987 involved regulating expenditure through strict fiscal controls. The implementation of tax reforms lead to reduction of indirect taxes through widening of tax brackets and

gradual lowering of income tax rates as well as introducing more of indirect taxes to address revenue shortfalls. Tax reforms are mainly undertaken in order to restore buoyancy to revenues, strengthen modern taxes and drastically reduce the complexity and lack of transparency of the system (Morriset and Izquierdo, 1993). Kusi (1998), and Osoro(1997) observe that there exists a link between reform programs and revenue productivity. Abdul and Muzafar (2002) supports the existence of a bi-directional causality between government spending and government revenue. Maynand and Guy (2009) found a unidirectional link between government spending and government revenue. Thus formulation of policies to deal with deficits requires the knowledge of causality between Government spending and Government revenue. It is argued that as long as spending grows faster than revenue, any policies designed to contain deficits may be successful only in the short-run. Buchanan and Wagner's (1977) argument is that if empirical investigations support the view that the high growth and the persistence of deficits in the public sector have caused the rapid growth in public spending, this implies that measures to curtail the later should comprise the largest part of any policy aiming at containing a deficit (Anderson & Warner, 1986; Khan, 1988). This study analysis the relationship between tax revenue and government expenditure in Kenya.



**Figure 1: Conceptual Framework**

Conceptually Tax Revenue is presumed to influence Government Expenditure. The study is therefore hypothesized as follows:

Ho: There is no effect of tax revenue on government expenditure in Kenya

**MATERIALS AND METHODS**

This study uses a causal research design to determine the effect of tax revenue on government expenditure and to establish the relationship between tax revenue and government expenditure in Kenya. The variables measured are tax revenue and government expenditure. The period of the study was 2004/05 to 2010/11. This period was selected to enable the researcher capture the dynamics in tax revenues and government expenditure. Tax revenue was measured using the ratio Total Tax Revenue/Gross Domestic Product. Tax Revenue/Total Government Revenue was estimated to analyze government revenue composition. Government expenditure was measured as Government Expenditure/Gross Domestic Product. The Gross Domestic Product in market prices was used in this study (Martinez-Vazquez & McNab, 2001).

Secondary data used in this study was obtained from the National Bureau of Statistics, The Economic Surveys, Kenya Institute of Policy Analysis and Research (KIPRA) and the Institute of Policy Analysis and Research (IPAR). Regression analysis was used to establish the relationship between tax revenue and government expenditure for the period 2004/05 to 2010/11. The analysis of data was done through use of descriptive and inferential statistics. Where descriptive methods helped in testing the magnitude while the regression statistics was used to estimate the effect of tax revenue on government expenditure through the following regression equation:

$$Y = a + bX + e$$

Where **Y** is government expenditure while **X** is tax revenue, **a** is the constant term, **b** is the coefficient and **e** is the error term.

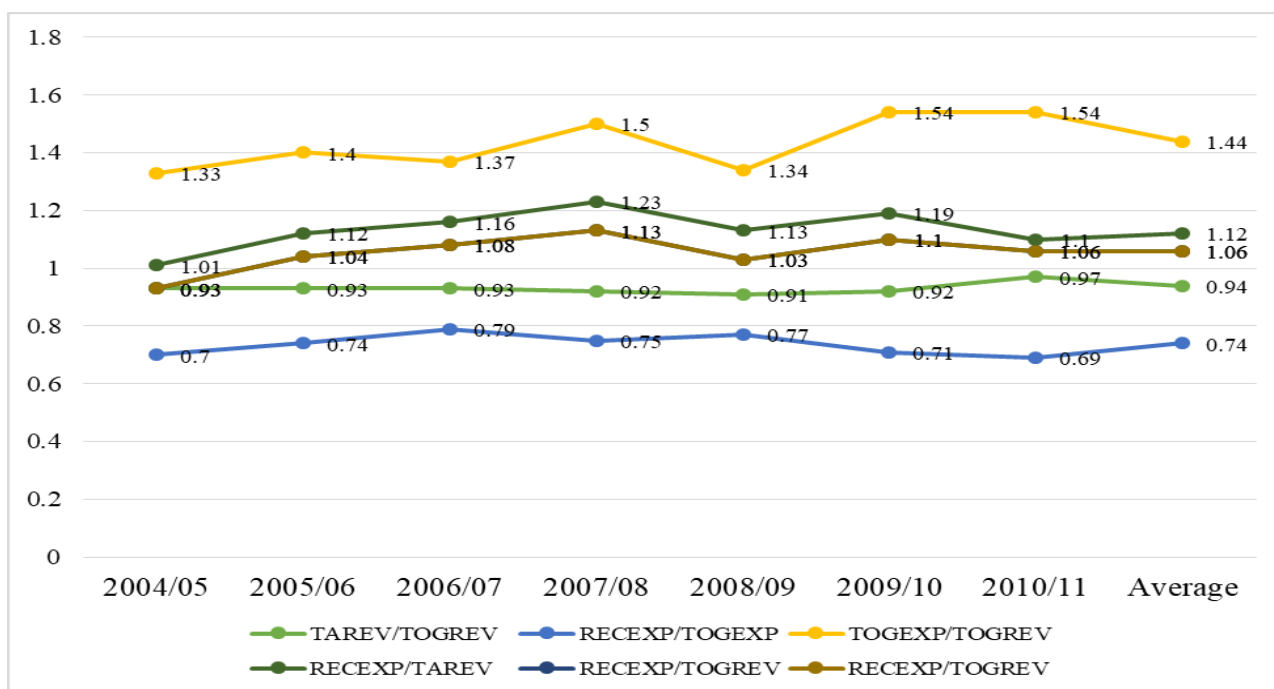
**RESEARCH FINDINGS**

**Descriptive Statistics**

The analysis in Table 1 revealed that recurrent expenditure to total government expenditure slightly fluctuated during the period but ranged between 69% and 79% during the period 2004/05 to 2009/11 and averaged 74% over the seven-year period. Evidently, recurrent expenditure constituted the highest proportion of government expenditure. On average development expenditures was about 26% of total expenditure during the study period. The average tax revenues amounted to over 90% of total government revenue hitting an average of 93.9%. This implies that the non-tax revenues constituted less than 10% of total government revenue or on average, 6.1% of total government revenue. Recurrent expenditure was generally higher than total government revenue, an indication that the economic resources were not generating sufficient revenues to finance routine activities of government. The recurrent expenditure to total government revenue ratio on average exceeded 100% except for the year 2004/05 when this ratio was 93%. The ratio averaged 105.9% meaning that on average, recurrent expenditures were more than total government revenue by 5.9%.

**Table 1: Revenues and Expenditures**

Year	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Average
TAREV/ TOGREV	0.93	0.93	0.93	0.92	0.91	0.92	0.97	0.939
RECEXP/TOGEXP	0.70	0.74	0.79	0.75	0.77	0.71	0.69	0.740
TOGEXP/TOGREV	1.33	1.40	1.37	1.50	1.34	1.54	1.54	1.436
RECEXP/TAREV	1.01	1.12	1.16	1.23	1.13	1.19	1.10	1.127
RECEXP/TOGREV	0.93	1.04	1.08	1.13	1.03	1.10	1.06	1.059



**Figure 2: Graphical Presentation of Tax Revenue to Total Government Revenue**

In absolute terms tax revenues increased during the period but remained relatively stable as a proportion to the gross domestic product (GDP). Tax revenue as a proportion of total government revenue decreased from 93% in 2004/05 to 91% in 2008/09 and increased slightly to 92% in 2009/10 before further increasing to 97% in 2010/11 to settle to an average of 94% during the seven-year period. Recurrent expenditure/tax revenue ratio increased steadily but marginally during the period. This ratio was lowest in 2004/05 at a value of 101% and was highest in 2007/08 when the value was 123% to average 112.7% during the study period.

The analysis reveals that recurrent expenditure remained higher than the tax revenue, an indication that recurrent revenue was not sufficient to finance the recurrent expenditures of Government. However, the recurrent expenditure tax revenue ratio appears relatively stable during the period. Total government expenditure remained higher than total government revenue during the period with a ratio of between 133% in 2004/05 and 154% in 2010/11 to average at 143.6% during the seven-year period. This public expenditure to public revenue ratio fluctuated during the period and was most volatile during the greater part of the study period.

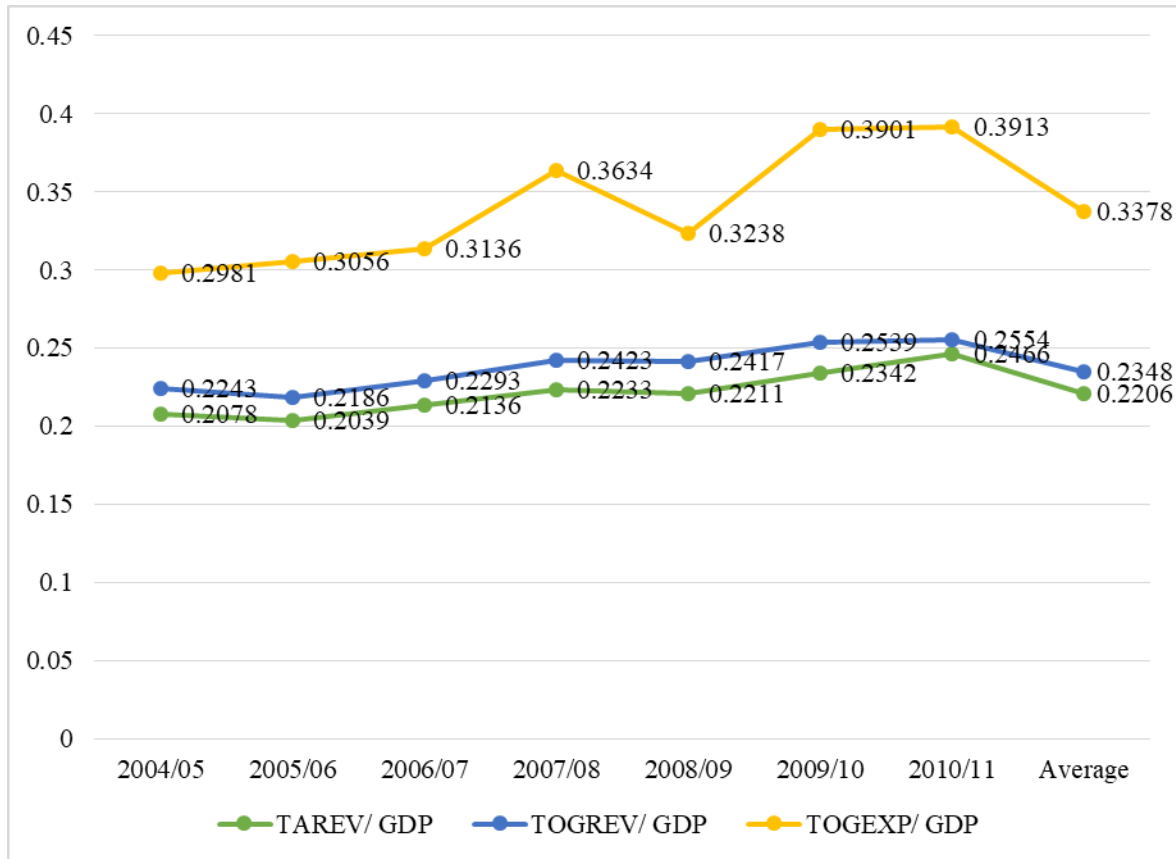
**Table 2: Government Revenues and Expenditure to Gross Domestic Product**

Year	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Average
TAREV/ GDP	0.2078	0.2039	0.2136	0.2233	0.2211	0.2342	0.2466	0.2206
TOGREV/ GDP	0.2243	0.2186	0.2293	0.2423	0.2417	0.2539	0.2554	0.2348
TOGEXP/ GDP	0.2981	0.3056	0.3136	0.3634	0.3238	0.3901	0.3913	0.3378

As a proportion of GDP total expenditures were stable at the beginning of the period but fluctuated towards the end of the period while assuming a steady increase during the study period except for 2008/09 when total government expenditure to GDP ratio decreased to 32.38% from 36.34% in 2007/08 but to increase again to 39.01% in 2009/10 and further to 39.13% in 2010/11. This ratio ranged between 29.8% in 2004/05 to 39.13% in 2010/11 to average 33.78% during the study period. Total government revenue to GDP

steadily increased during the period from a low of 21.86% in 2005/06 to a high of 25.54% in 2010/11. The average was 23.48% which is within the globally accepted ratio of 24%.

The proportion of total tax revenue to GDP increased from 20.78% in 2004/05 to 24.66% in 2010/11 to average at 22.06% during the seven-year period. The data also shows that total tax revenue as a proportion of GDP fluctuated marginally during the period of analysis. Total government revenue to GDP was slightly higher than tax revenue to GDP, ranging from 21.86% in 2005/06 to 25.54% in 2010/11. Essentially this ratio was 22.43% in 2004/05 slightly below the average of 25.54% for the period of analysis.



**Figure 3: Total Government Expenditure to Gross Domestic Product**

The graph above shows that Tax revenue as a proportion of GDP increased at the beginning of the period, decreased for the greater part of the period before increasing slightly at the end of the period and generally constituted the highest component of government revenue. Generally, tax revenue as a proportion of total government revenue was relatively volatile during the period.

**Inferential Statistics**

The study further carried out regression analysis to estimate the effect between variables. The results on model summary was determined based on the R squared, *F* – test and *p* – value (Sig) in the Analysis of Variance (ANOVA) output were used to establish the joint significance of all predictor variables on dependent variable. Moreover, the regression model provided the coefficients of variables together with *t* – tests and *p* – values which were used as a measure of significance level of coefficients of each independent variable on dependent variable. This done based on confidence interval of 95% where the *p* –value was ≤0.05 indicated significant effect and when *p* – value was found to be >0.05 indicated insignificant effect as advocated by Kendall and Gibbons (1990) and Krijnen (2004).

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.929(a)	.864	.836	.01616

a Predictors: (Constant), Government Tax Revenue

The model on the relationship between government tax revenue and government expenditure is significant as denoted by the correlation coefficient (r) of 92.9%. The goodness fit of regression model provided an  $r^2$  of 0.864 which could imply that government tax revenue has ability of explaining an overwhelming 86.4% of government expenditure and only 13.6% could be explained by other factors not in the model.

**Table 3: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.008	1	.008	31.692	.002(a)
	Residual	.001	5	.000		
	Total	.010	6			

a. Predictors: (Constant), Government Tax Revenue

b. Dependent Variable: Government Expenditure

The *F* value of 31.692 reveals that the relationship is significant. With the *p* – value of 0.002 is an indication that the study should reject the null hypothesis that there is no effect of tax revenue on government expenditure in Kenya, given that the error we would make by doing so is <0.05.

**Table 4: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.248	.105		-2.366	.064
	Government Tax Revenue	2.483	.441	.929	5.630	.002

a. Dependent Variable: Government Expenditure

The constant term of -0.248 reveals that if no tax revenue is generated, government expenditure as a proportion of GDP would decrease by 24.8% implying that government needs to incur expenditure so as to generate revenue. The equation also reveals that Government needs to incur expenditure so as to generate tax revenue. The regression model reveals that there is a positive relationship between government expenditure and tax revenue as denoted by the coefficient of 2.483. Recurrent expenditure was generally higher than total government revenue, an indication that the economic resources were not generating sufficient revenues to finance routine activities of government. These findings are in line with that of Mutambi (2001) study that found out that discretionary tax measures in Uganda, mainly changes in the rates and improvement in tax administration and played a significant role in increasing tax revenue. Furthermore, in his study based in Tanzanian context, Osoro (1997) found out that public spending drives public revenue suggesting that one of the causes of the increased tax revenue is rapid growth in public spending. Another study carried out in Turkey by Wahid (2008) revealed that an increase in government expenditure leads to an increase in tax revenues.

**CONCLUSIONS**

Governments raise revenues and incur expenditures to enable the provision of social merit goods and services. This means that governments should have one of its objective as that of maximizing tax revenues while maintaining control of government expenditures. This explains why tax reforms are undertaken in many economies to improve the legal, regulatory and institutional frameworks of taxation while improving the tax policies and tax administration, all aimed at increasing tax revenue. Governments are however expected to be cautious to avoid over-taxing its citizens. Expenditure management principles including prioritization of expenditures, streamlining the law on expenditure management and defining appropriate parameters and ratios for recurrent versus capital expenditure is important. While recognizing that recurrent expenditures are high, particularly in many developing countries, governments in developing countries should not compromise their development agenda. While appreciating the role of development partners in the financing of development projects government should also define their development expenditure component which they should set aside for supporting development activities.

For policy purposes, a discussion on government revenue and government expenditure would not be complete without mentioning the aspect of government deficit. Therefore, for government to reduce its fiscal deficit there is need to reduce government expenditure. Deficit cutting measures goes hand in hand with

expenditure cutting measures which is in line with the theory that one of the causes of government deficits is the high levels of Government spending.

#### RECOMMENDATIONS

Government was not able to raise sufficient revenues to finance its recurrent expenditures which means that either government needs to reduce its recurrent expenditures, increase its tax revenues or borrow more to be able to pay for its recurrent as well as non-recurrent expenditures. Although theoretically the highest proportion of government capital projects are financed using foreign aid and grants, developing countries, Kenya included, need to mobilize its resources not only to finance its recurrent expenditures but to finance part of its development budget as well. Identifying sustainable non-tax revenues could enable government finance some of the non-routine activities, including financing some capital projects. Government might also find it useful to peg its borrowing on projects that contribute positively to economic growth and development.

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