Impact Of Government Expenditure On Private Investment In Kenya

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ABSTRACT

Kenya's investment by private individuals and firms has not been sustainable since the country attained independence. This rather sorry state of affairs has raised concern to the government since investment is considered a key component propelling economic growth and development. Government of Kenya has designed many policies aimed at encouraging private investment but little fruits have been borne. This study aimed at finding out the repercussions of government expenditure on private investment in Kenya. The study adopted VAR technique using time data for period 1963-2012. The research findings indicated that that both recurrent and development expenditure enhanced private investment. The reforms on public expenditure were found to deter activities of private investors. The study concluded that there was need for government to re-allocate funds towards project that are valuable to the private sector and eschew from those that contend with or crowd it out. The study recommended that government should undertake fiscal reforms in the areas that promote private investment. Such reforms were expected to encourage investors because that was a sign of government commitment prudent financial manage.

1. INTRODUCTION

1.1 OVERVIEW OF PRIVATE INVESTMENT IN KENYA

Over the years Kenya has witnessed stumpy and erratic private investment. Immediately after independence in 1963 there was remarkable growth in private investment. It can be noted that government audaciously demonstrated commitment in enhancing promotion of private sector during this period. The necessary policies were developed which were geared towards giving impetus to the investors as well as creating necessary foundation for growth of economy which was under new management of mostly natives. For instance, Sessional Paper No. 10 of 1965 was published and majorly this paper laid down policy recommendations intended to hasten capital accumulation in the country (Republic of Kenya, 1965). The period between 1971 and 1977 was associated with decline in private investment thanks to the economic crisis prevailing then, which majorly consisted of oil crisis of whose impact was felt in the whole world. In 1976 to 1978 Kenya was enjoying coffee and this impacted positively on the economy thereby substantially promoting private investment. The major setback to growth in private investment occurred in 1977 when the three East African countries parted ways resulting to collapse of economic integration in its early stage. This rather unfortunate affected the output since the market of commodities was severely contracted. Debt crisis and change of interest rate policy by the central bank in early 1980s accelerated the problems which private investors were experiencing (Legovini, 2002; Kimani, 2005; Were, Ngugi & Makau, 2006). In late 1980s and early 1990s there was sharp decline in investment which can be blamed on key donors giving tough conditions to government before funds can be given. Specifically introduction of structural adjustment programmes by IMF

and World Bank resulted to government resulting to domestic borrowing crowding out private investment (Wagacha, 2000; Kabubo - Mariara & Kiriti, 2002; Republic of Kenya, 2003; Were *et al*., 2006).

In mid 1990s, there was slight growth in investment thanks to the economic policies that the government was putting in place. Implementation of these policies and optimism surrounding its application may have crowded-in private investment (Republic of Kenya, 1994). In late 1990s and early 2000s rather unfortunate events were happening which were very precarious on private investment. The political polarization associated 1997 elections scared away potential investors as well forcing others to relocate to less risky destinations. It is during that time that there were tribal clashes in the coast and rift valley regions resulting to most of investors from other regions being driven away. El nino rains of 1997 destroyed infrastructure affecting essential services such as power, transport and communication, security. Lastly, cut on development expenditure to achieve fiscal deficit target of at most 2.5 per cent of GDP as prescribed by Sessional Paper No. 1. of 1986 frustrated investment activities in the country (Republic of Kenya, 1986, 2002 and 2003; Kiptui, 2005). Upward trends were experienced again in 2003 but were not robust since the optimism that investors had with change in government was stifled by political bickering within the ruling coalition. The final blow to any hopes of growth in the economy was post election violence in 2007 that led to displacement of thousands of domestic and foreign investors (Mwakalobo, 2009; Republic of Kenya, 2009).

1.2 TRENDS OF GOVERNMENT EXPENDITURE IN KENYA

The expenditure can be broadly classified in terms of purpose as recurrent and development expenditure. Recurrent expenditure refers to expenditure of recurrent expenses that are less discretionary and are made on ongoing programmes or activities. Recurrent expenditure may affect private investment through its effects on people's ability and willingness to work, save and invest. Development expenditure refers to expenditure that is generally more discretionary and is made on new programmes and activities that are yet to reach their final desired state of completion. It constitutes of investment in such schemes as construction of railways, roadways and communication systems, irrigation and power projects, which raise economic growth both directly and indirectly through encouragement of further private investment (Ag'enor, 2007).

As compared to recurrent expenditure Kenya has experienced very low development expenditure since independence. During the initial years of independence, the movements of recurrent and development expenditure were converging and these were the years Kenya recorded an impressive private investment performance. During the initial period of independence, there was an upward trend in development expenditure, reaching 36 percent of public expenditure in 1970 compared to 17 percent in 1963. This increase was attributed to increase in the construction costs (Republic of Kenya, 2003). During this period, the country

was rebuilding and large amounts of money were spent on infrastructure and services. There was huge expenditure on electricity, roads, telecommunications and airport expansion. A lot of money was also spent on resettlement, nationalization and agricultural development. The proportion of development expenditure remained, on average 32 percent of total expenditure from 1972-1979, but began to decline thereafter and stagnated at about 19 percent of total government expenditure between 1982 -1996. A sharp decrease to less than 5 percent between 1999 and 2002 was witnessed. The shrinking trends in development expenditure may be blamed on the austerity measures by World Bank's in form of Structural Adjustment Programmes (SAPs) or through International Monetary Fund (IMF's) stabilization programmes. Since most recurrent expenditure is fixed the only leeway the government had in the wake of these austerity measures was its development budget (M'Amanja and Morrissey, 2005). Finally, development expenditure showed an upward trend between 2003 and 2007. This was because of increased infrastructural expenditure in areas of roads, telecommunication, health and education, rehabilitation of airport in Nairobi, Mombasa and Kisumu.

Recurrent expenditure showed a declining trend from about 80 percent of total expenditure in 1963, to about 67 percent in 1971. This is because most expenditure in education and health were in the hands of the local authorities. From 1979 there was an upward trend in recurrent expenditure up to 88 percent of expenditure in 1993, which later dropped to 77 percent of government expenditure in 1996. This could be attributed to drought of 1980, compensation to Uganda government for the assets it lost to Kenya due to collapse of East African Community, increased expenditure on education since responsibility was transferred from local authority to central government. Education expenditure also increased due to expansion of educational physical facilities, expanded curricular and increased demand for teachers wage bill as a result of implementation of 8-4-4 system of education. The proportion of recurrent expenditure reached over 90 percent between 1997-2000, due to large expenditure incurred to finance the general election of 1997 and higher salary rewards to teachers and civil servants. Thereafter it declined, reaching below 71 percent in 2007. The decline was as a result of government refocusing its expenditure in favour of development, operations, maintenance and reduction of wage related expenditures.

1.3 GOVERNMENT EXPENDITURE REFORMS IN KENYA

Since independence, various government expenditure reforms have been implemented. The reasons for the reforms were to raise and sustain the economic growth rate of the country thereby affecting private investment positively. The public sector contributes to GDP growth rate through provision of government services such as education, health and administration, and productive activities in areas of agriculture, manufacturing, transport and communication and trade. The government plays a leading role in determining the pattern of private investment growth through public sector reforms, which determine directly how much of the country's resources to divert to its own use, and how those resources should be allocated in order to

enhance private investment. Private investment performance in Kenya has been affected by the government expenditure reforms that have been undertaken by the government. The main government expenditure strategy has been restructuring overall expenditure by directing more resources to activities that complement private investment. To achieve this goal, various policy reforms have been implemented, which include: rationalizing government expenditure, with more resources being channeled to development and recurrent non-wage operating and maintenance expenditure in order to crowd – in private investment (Republic of Kenya, 2002).

In the plan period 1974-1978, the policy target was to increase development expenditure by 9 percent in order to expand output. Total capital formation was expanded three times that of the preceding five years. These investments were in agriculture, forestry, manufacturing, electricity and government capital formation. In terms of allocation, priority was given to rapidly expanding education programme and economic and social services, while growth in expenditure on administration, new buildings and main trunk roads was restricted (Republic of Kenya, 1974). During the planning periods 1979-83, 1984-88, 1989-93 and 1997-2001, the government undertook rationalization of government expenditure, with more resources being channeled to development and recurrent non-wage operating and maintenance expenditure in order to stimulate economic growth (Republic of Kenya, 1997).

Sessional Paper No 1 of 1986 on Economic Management for Renewed Growth contained the Structural Adjustment Programmes suggested by World Bank and International Monetary Fund (Republic of Kenya, 1986). The central thrust of the policies was to rely on market forces to mobilize resources for economic growth and development, with the role of government increasingly confined to providing an effective regulatory framework and essential public infrastructure and social services. The changes in allocation of budget resources were implemented by government. The government spent proportionately more on immediately productive services. It also increased its outlay on infrastructure to promote smaller towns and rural centers to improve overhead facilities, including roads, power and water supplies. In agriculture, more money was channeled to research, extension services including tea and coffee planting programmes and other projects to raise agricultural production. The government spending on polytechnics and credit programmes to assist small scale industries in both rural and urban areas were also increased. These expenditures received the first allocation in the budgets that followed (Republic of Kenya, 1986). As a result, the share of formal education, health and other basic needs expenditure was reduced (Republic of Kenya, 1986).

The other major change in budget allocation involved a concerted effort to make all government outlays more efficient and productive through budget rationalization (Republic of Kenya, 1986). To achieve rationalization, the following measures were taken: projects with potentially high productivity were identified and their completion was advanced with an infusion of funds; projects with low potential benefits were identified and

postponed or cancelled to free up funds for projects with higher returns; resources were shifted toward operation and maintenance expenditure of existing public facilities and away from investments in new projects; and new development projects were to be funded only if they were productive investment with very high priority (Republic of Kenya, 1986). The general approach then was that available resources for development budget were concentrated on few projects to shorten the construction or implementation period. At the same time, recurrent allocations were diverted to improve the utilization of existing capacity in order to raise productivity of public investments. The goal was to ensure that all government investments became productive as soon as possible through a programme of budget rationalization (Republic of Kenya, 1986). In order to reduce the rate of growth of expenditure on salaries and allowances, several measures were adopted in 1990, which included the freezing of recruitments into job groups A to G and the ban on filling of posts that were vacant for more than six months (Republic of Kenya, 1994).

Sessional Paper No 1 of 1994 articulated various expenditure policies (Republic of Kenya, 1994). There was a re-allocation of budget resources towards the core functions of government. These included maintenance of law and order, the administration of justice, the provision of broad-based education and health services, the provision of economic infrastructure and the protection of the environment. To spur private investment and economic growth, the development expenditure and recurrent non-wage operating and maintenance expenditure were increased as a share of GDP. The budget rationalization measures aimed at maximizing the productivity of public expenditure. In particular, objective technical and economic criteria were to be applied to project selection, with priority given to projects in the areas of health, education, infrastructure and environment (Republic of Kenya, 1994). In the plan period 2002-2008, Kenya's fiscal strategy aimed at increasing the level of economic activity by enhancing the role of private sector as the leading sector in wealth creation. The objectives were: to sustain reduction in the level of government expenditure as a percentage of GDP; to change the composition of government expenditure to focus more on efficient public investment and operations and maintenance in the long-run; and to strengthen the budgeting process. This was to be achieved by rationalizing allocations to recurrent expenditure, especially on wages, interest payments and transfer, while allowing development expenditure to grow (Republic of Kenya, 2002). There has been increased development expenditure, especially that targeting government investment in core social expenditure in education and health. The expenditure strategy adopted in the Economic Recovery Strategy (ERS) document was to restructure overall expenditure by gradually reducing the level of recurrent expenditure. This was aimed at facilitating a rapid increase in development expenditure within a sustainable macroeconomic framework (Republic of Kenya, 2004).

In the Vision 2030, the government is targeting private investment to be at least 24 percent of GDP (Republic of Kenya, 2007). To achieve this, the government has proposed restraint in the public spending to ensure that it does stifle private investments. The key element of the fiscal strategy includes containing growth of total expenditures while creating fiscal space through expenditure rationalization to shift resources from non-priority to priority areas, including expenditure on the flagship projects that are critical to achieving Vision 2030 (Republic of Kenya, 2007). In this context, the wage bill is expected to decline gradually to 6 percent, suggesting the need for civil service reforms that would facilitate higher remuneration for smaller and more efficient civil service. The increasing requirements for operation and maintenance for the expanded infrastructure has been catered for. The share of development expenditure in total outlays is to be increased from 18 percent in 2007 to 38 percent in 2012 and thereafter. Most of the increase in development expenditure is to benefit the priority sectors such as the infrastructure (expansion of road networks, energy and water supply capacities, and information and technology), agricultural sector and social sectors such as health and education. The country is to scale-up resources towards the above sectors in order to ensure efficiency and effectiveness in their use and management (Republic of Kenya, 2007).

1.4 STATEMENT OF THE PROBLEM

Private capital accumulation is a key ingredient for ensuring a country achieves robust economic growth. Over the years government expenditure restructuring has occurred and contrary to the intention of rejuvenating the economy, growth has not been appealing for several decades. Public expenditure rationalization, budgetary reallocation to favour development expenditure, enhancing prudent public expenditure management and containing growth of less productive expenditure are few of the steps taken to create enabling environment for private investment thereby making the economy more efficient. Despite these measures, private investment levels have been low and pathetic. Private investment as percentage of GDP since independence averaged 12.7 percent for the study period. As noted by Karumba (2007) this ratio is below what the successful economies of the world are experiencing and it cannot be considered to be adequate to spur economic growth as stipulated by Kenyan Vision 2030 of having growth of 10 percent and sustaining it. Of concern has been that public investment, which ought to crowd-in private investment, has been growing undeterred. KIPPRA (2012) noted that "the share of public investment in gross investment has increased. In 2004, public investment share in gross investment was 13.6 per cent, while private investment share was 86.4 per cent. However, by 2012, the relative shares for public and private investment were 23.4 per cent and 76.6 per cent, respectively". This shows that public investment has grown relatively faster than private sector investment. Low and declining private investment has been experienced at the time when there has been immense efforts to formulate appropriate policies to promote private investment environment. Among these policies is the reform in government expenditure. Despite intensive reforms in public expenditure, private investment growth has not been remarkable. The role of government expenditure on

private investment performance in Kenya has not received much attention. Therefore, it is not clear what effects the government expenditure have had on private capital accumulation. This is an impediment to policy formulators in achieving high levels of private investment through public expenditure management. This formed the motivation to this study. The objective of this study was therefore to evaluate how the government expenditure and its reforms impacted on private investors' capital accumulation in Kenya.

2. LITERATURE REVIEW

The impact of public expenditure on private investment behaviour remains a controversial issue. According to one school of thought, an increase in government expenditure, due to increased borrowing requirements, stifles private investment which, as a consequence retard economic growth. This is phenomena is referred to as the `crowding out' hypothesis. Another theory suggest that any increase in government expenditure followed by equal increases in private saving have no first-order effect on private spending a concept referred to as 'Ricardian Equivalence'.. This contrasting school of thought gave rise to several empirical studies attempting to assess the impact of public expenditures on private investment, with most of them showing mixed results in support of one theory or the other. Some of these empirical findings are as follows:

Kiptui(2005), used ECM and Co-integration analyses in his study where he examined the effects of fiscal adjustment process on private investment in Kenya from 1972-99. He analysed the determinants of private investment but in interpreting the results he concentrated on the fiscal variables mainly; government consumption expenditure, budget deficits, tax burden and public debt. His study found that debt servicing problem crowded-out private investment. In the econometric analysis used, the result was a significant lagged effects of budget deficits on private investment, which was a sign that benefits of fiscal restraint do not come immediately but gradually. In addition the benefits were even larger in that domestic and foreign debt service, tax burden and total debt stock all had negative effects on private investment. The other observation as per his study was negative effects of public investment on private investment. It was also notable from his results that a positive effect of government consumption expenditure on private investment existed. He used ECM which sends light on relative effects or elasticities of the regressors. However, there is no information about how long this effect would last. Another setback is the assumption of private investment being the regressand arbitrarily. This affects the results of the model estimation negatively since there is a possibility of some variables being influenced by private investment.

Erden and Holcombe(2006) in their study involving 19 developing countries examined the relationship between public investment and private investment where he measured the causal impact of public sector's spending on private sector's investment. From the results a 1 percent increase in the public investment will result to about a 0.5 percent increase in the private investment in the long run. Notably, the short run impact is positive but half as large. The local population level is key in determining the allocation to the local

governments of the federal funds. In this respect, they used population count revisions in decennial census years as exogenous shocks to the cross-sectional allocation of the funds. Kim and Nguyen(2012) found that exogenous increases in the government expenditure reduce firm's capital and R&D investment which ultimately contracts investment. This leads to decreases in the employment growth and sales growth as well as increase in dividend payouts and repurchases. The study found that firms that are smaller in size, concentrated geographically and located in high employment rate regions, experience more pronounced effects of government spending. Increase in government hiring and wage spending was found to reduce subsequent corporate employment growth. The fact that government spending crowds out private investment was held by the study. However, they used the labour channel rather than the traditional interest rate or tax rate channel.

Laopodis(2001) used the ECM and co-integration to examine effects of government expenditure categorized as military and no-military on gross private investment. Among the non-military public expenditures were expenditures on infrastructure, consumption and other general spending by the government. Empirical study of Greece, Portugal, Ireland and Spain shows that government capital spending stimulates investment in some cases. There is a controversy about military spending and its economic effects and as per this study military spending had no influence on private investment. A study by Wang(2003) for Canada during the period 1961-2000 sought to establish long-run effects of government spending on gross private investment. Government spending was on education, health, capital, infrastructure and on charges on debt. Using ECM and Co-integration, he found that government spending on education and health had crowding-in effects whereas government spending on capital, infrastructure and on debt charges had crowding-out effects on private investment. Other expenditures on consumption, social services and protection of persons and property had no statistically significant long-run effect on private investment.

M'Amanja and Morrissey(2005) studied the effects of fiscal policy on economic growth in Kenya. As per the study fiscal policy was vital in explaining economic growth. The findings were that productive consumption and public investment were necessary factors in explaining growth of real per capita income in Kenya. An increase in productive consumption seemingly led to a strong decline in economic growth, signaling a detailed examination of the composition of this expenditure and the need to re-organize it in such a way that it has positive effect on economic growth. The other side examined is where increase in public expenditure enhances its complementarity role to private sector thereby leading to growth. We establish from this study that government should do more of productive spending that is, increase its own investment in areas that have positive effects on private sector and reduce the expenditures that crowd out the private investment. Narayan(2004) studied the effect of public investment on private investment for Fiji using the ECM. He divided the sample into two where he found cointegration between government and private investment over the period 1950-75 and no co-integration in the period 1976-2001. There was crowding-in of private

investment by government investment for the first period while in the second period, a statistically weak relationship existed.

Pereira and Roca-Sagales (2001) examined impact of public investment on private sector performance in Spain. The study looked at aggregated as well as disaggregated sector levels where he found that in the overall level, public investment crowds in private capital accumulation and stimulates private sector production. The conclusion for the disaggregated level was that public investment promoted private capital accumulation. Service sector was the biggest gainer in absolute terms with all other sectors but agriculture having some benefit. The benefits were distributed such that service sector benefitted in terms of private capital formation while manufacturing and construction benefitted in terms of employment and output. The observation from the study was that public investment made manufacturing more labour-intensive while service sector becomes more capital-intensive.

For sure the literature reviewed gave conflicting accounts on how public spending affects private investment. The present study did not seek to solve the controversy surrounding the impact of government spending on private investment. It however used a different methodology to enlighten on the relationship between the two variables. The use of VAR in this study enabled the study not only to know the relationship between them but also gave information on how long it took for the impact of government expenditure on private investment to fizzle out.

3. METHODOLOGY

3.1 MODEL ESTIMATION

The literatures reviewed highlighted role of government expenditure in influencing levels of private investment. The literature has demonstrated that government expenditure can be broadly classified into development and recurrent expenditure. Since there is no economic available giving the granger causality between government expenditure and private investment and the literature reviewed gave conflicting results on the relationship between these variables, the study adopted a VAR model for estimating simultaneous shocks to more than one variable and used that to investigate unexpected and equivalent structural shocks. This approach was in line with Fu, Taylor and Yucel (2003) and Sim (1972 and 1980) recommendations in such circumstances. Despite the fact that three different types of VAR exist: The reduced form VAR, the recursive VAR and the structural VAR. The reduced VAR or standard VAR which was adopted by this study sidestepped the need for structural modeling, by modeling every endogenous variable in the system as a function of the lagged values of itself and of all the endogenous variables in the system (Engle & Granger, 1987). The reduced form and the recursive VAR models are statistical models that utilize no economic structure beyond the choice of variables. The compact form of a VAR model is represented as:

$$X_t = A_0 + A_1 X_{t-1} + A_2 X_{t-2} + \ldots\ldots\ldots\ldots + A_p X_{t-p} + \varepsilon_t$$

Where A_0 is n x 1 vector of constant terms, $A_1, A_2, \ldots\ldots\ldots\ldots, A_p$ are n x n matrices of coefficients, X_t is n x 1 vector of endogenous variables and ε_t is a vector of serially uncorrelated error terms that have a mean of zero and a covariance of matrix ϕ. In the VAR model, each of the variables usually regressed on a constant variable A_{ij}, p lags of itself, and p lags of each of the other variables in the model and the error term ε_t.

Longer lag lengths are normally appropriate since they fully capture the dynamics of the system being modeled and increasing the parameters. However, given the data limitations, lag length determination became a major challenge. This is because, longer lags reduce degree of freedom and the problem is further compounded by data limitations. Therefore there was a need to have a tradeoff between having a sufficient number of lags and a sufficient number of parameters to estimate. The choice of p (the number of lags) was determined using the Akaike information criteria (AIC), and the Schwatz information criteria (SIC). Given that literature indicates that government expenditure granger causes private investment, the model to be estimated is as expressed:

$I = f(Y, DX, RX, DMY)$ where: I is private investment which captures total capital accumulation by individuals and firms was derived by subtracting government investment from gross fixed capital formation. Y represented national income, was measured by the GDP.. DX was used to capture development government expenditure which is expenditure on capital overheads. It was measured by the total government expenditure less recurrent expenditure. RX is the recurrent expenditure which means purchase of goods and services at all levels of government. It encompasses purchases of materials, office supplies, fuel and lighting, salaries and wages, travel services and payment of rent. It was measured by recurrent expenditure on labour costs and other goods and services. DMY captured dummy variable for expenditure downsizing which refers to reduction in cost as a result of reducing civil servants. It was equal to one in the years 1991, 1993, 1994 and 2002 when Kenyan government implemented golden hand shake and comprehensive civil service reforms and zero otherwise.

4. DATA ANALYSIS AND INTERPRETATIONS OF RESULTS

4.1 TIME SERIES PROPERTIES

The study made use of time series data and testing whether data were stationary at levels or not was essential procedure .Both ADF and PP methods were applied to do this and in cases where conflict occurred PP more progressive method was considered. The results in table 1 show that, in all variables, the null hypothesis for

the presence of unit roots was accepted thus the variables were non - stationary at levels. Since all the variables were non-stationary, it was necessary to difference them. At first differences, most macroeconomic data become stationary Private investment, output, development and recurrent were differenced once and became stationary confirming what Kelly & Mavrotas, (2003) suggested that at first difference most macro economics data become stationary. The unit root tests are given in tables 1 and 2 below. Table 1 indicate that not all variables were stationary at levels but after first difference, as given by table two all series became stationary.

Table 1: Unit Root Test Results

| Variables | Test at Levels | Unit Root Test | | | |
| | | ADF test | | PP test | |
		t-statistic	Critical Value (5%)	t-statistic	Critical Value at (5%)
Private Investment	Constant	0.9697	-3.7832	0.6596	-3.6214
	Constant and Trend	-1.7129	-3.4611	-2.0652	-3.4589
Recurrent Expenditure	Constant	3.1936	-2.8951	5.5818	-2.8929
	Constant and Trend	1.9170	-3.4623	0.6063	-3.4589
Output	Constant	0.8340	-2.8929	1.6774	-2.8929
	Constant and Trend	-2.9957	-3.4589	-2.9575	-2.4589
Development expenditure	Constant	2.5104	-2.8951	6.5310	-2.8929
	Constant and Trend	2.3114	-3.4623	3.6413	-3.4589

Table 2: Unit Roots Tests Results

| Variables | Test at first difference | Unit Root Test | | | |
| | | ADF test | | PP test | |
		t-statistic	Critical Value (5%)	t-statistic	Critical Value (5%)
Private Investment	Constant	-4.2469	-3.8136	-8.1214	-3.5824
	Constant and Trend	-5.8808	-3.4611	-10.4073	-3.4594
Recurrent Expenditure	Constant	-2.0569	-3.6421	-10.5588	-3.2897
	Constant and Trend	-3.7629	-3.4622	-13.7283	-3.4594
Output	Constant	-12.6614	-3.8461	-13.5412	-3.5874
	Constant and Trend	-11.6263	-3.4594	-12.0336	-3.4594
Development Expenditure	Constant	2.7025	-2.8951	-10.1533	-2.8932
	Constant and Trend	1.6153	-3.4623	-11.4221	-2.8932

4.2 RESULTS AND DIAGNOSTIC TESTS

VAR estimation technique gives the impact of one standard deviation on independent variables in this case recurrent expenditure, development expenditure and output on private investment. To increase the degrees of freedom data was taken semi-annually which was essential to facilitate lagging. Under the VAR estimations, each variable is expressed as function of its own present and past values, as well as function other variables' present and past values and thus adequate degrees of freedom are necessary. It is always necessary to carry out diagnostic tests on VAR estimation to avoid spurious results. The diagnostic results after VAR estimations are given in Table 3.

Table 3: VAR Diagnostic Statistics

Condition Evaluation Check	Statistic	Conclusion
Stability Check	Roots of the polynomial are within unit cycle. Highest is 0.835423356	VAR is stable
Lag Exclusion Test	Wald test for 1 lags, Chi-square = 69031.001 p-value = 0.0054	1 lags is important
Residual Serial Correlation	LM test statistic = 368.1346 P-value = 0. 02834	No serial correlation at lag order 1
Residual Multivariate Normality	Jarque-Bera test statistic (joint) = 12.3256 p-value = 0.1654	Residuals are multivariate normal.
Residual Heteroscedasticity	Chi-square = 1632.062 p-value = 0.092	Residuals are not heteroscedasticity

4.3 THE IMPACT OF GOVERNMENT EXPENDITURE ON PRIVATE INVESTMENT

The second objective of the study was to examine the impact of various components of government expenditure on private investment. Government expenditure may crowd in or out private investment. Several studies done in Kenya give conflicting findings about the impact of government expenditure on private investment. For instance, Kiptui (2005) found that recurrent expenditure promoted private investment while M'Amanja and Morrissey (2005) finding was that only development expenditure mattered for private investment. The present study estimated vector autoregression model and subsequently used impulse responses and variance decomposition analysis to achieve this objective.

4.3.1 THE IMPACT OF DEVELOPMENT EXPENDITURE ON PRIVATE INVESTMENT

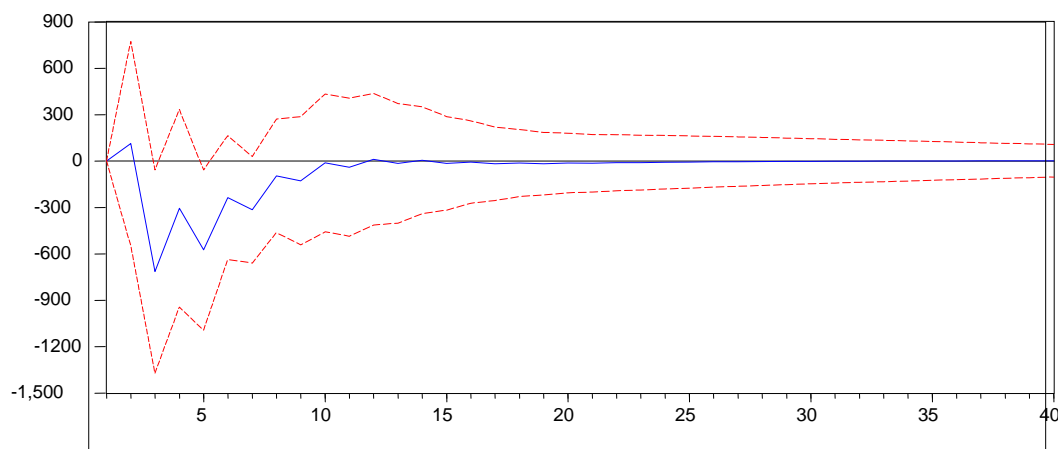Figure 1 shows the impact of a one standard deviation shock on the government expenditure on private investment.

Figure 1: The impact of development expenditure on private investment

The response to one standard deviation to development expenditure resulted in a stable time path, which declined to zero with respect to private investment as shown in the figure. The impact of a one standard deviation shock on development expenditure on private investment lasted for twelve semi-annual periods on the negative territory, and then remained at the equilibrium. The impulse response graphs indicated that, even though the impact was on negative territory for long, it had upward trends for better part of the time when the impact was felt. This means that development expenditure promotes private investment. This implies that there was complementarity between development expenditure and private investment. Seruvatu and Jayaraman (2001) findings on factors affecting capital accumulation in Fiji correspond to the results of this study. In their study, it was found that government participation in accumulating physical capital on the infrastructure positively affect private investment.

Essentially, there is no reason why government expenditure on development should not complement private investment. What is required is reallocation of funds towards activities that supports private investment. Development expenditure on areas such as roads, railways, ports, communication, water and electricity could increase the productivity of inputs in the private sector thus promoting their expansion. High government expenditure on transport, communication and energy could create an enabling environment for businesses to thrive through reduced cost of production. This will effectively result to increase in private investment in the long-run.

4.3.2 THE IMPACT OF RECURRENT EXPENDITURE ON PRIVATE INVESTMENT

Figure 2 shows the impact of a one standard deviation shock on recurrent government expenditure on private investment.
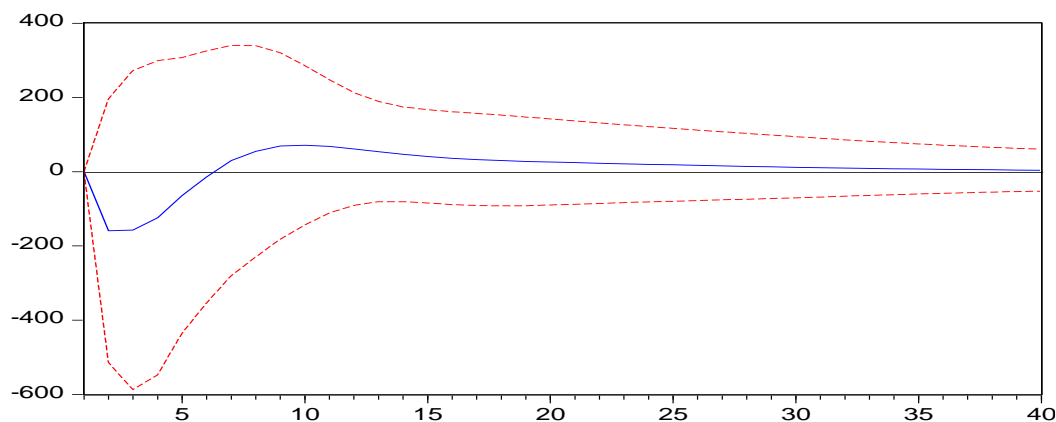
Figure 2: The impact of recurrent expenditure on private investment

The response to one standard deviation innovation in recurrent expenditure resulted in a stable time path, which declined to zero with respect to private investment as shown in the figure. The impact of one standard deviation shock on recurrent expenditure took thirty six semi-annual periods to fizzle out. The effect was initially on the negative side for six semi-annual periods, and then moved to positive territory for thirty semi-annual periods before converging to the equilibrium. This suggests that recurrent expenditure has a mixed effect on the private investment and the effect is felt for long in the economy. However, this expenditure promotes private investment because the effect takes longer in the positive territory. This finding corresponds to Kiptui (2005) who got similar results using ordinary least squares.

The possible explanation of this result is that expenditure was incurred in areas such as education and health which are instrumental in increasing the labour productivity and lowering cost of production to the investors. It is worth noting that expenditure on health and education is a major part of government of Kenya's budget. On the other hand, if the government could have incurred much of its expenditure in buying goods locally, it could have resulted to expansion of domestic industries and thus growth in private investment (M'Amanja and Morrisey, 2005; Maingi, 2010). According to Poot (2000), government expenditure on education, even of a recurrent nature is positive on private investment since it constitutes investment in human capital which is increasingly becoming an important determinant of private investment.

4.4. THE IMPACT OF EXPENDITURE DOWNSIZING ON PRIVATE INVESTMENT

Another objective of the study was to analyze the impacts of government expenditure reforms on private investment. To achieve this objective, this study used vector auto-regression technique to get impulse responses and variance decomposition analysis of expenditure downsizing on private investment. Expenditure downsizing was captured by a dummy variable representing reduction in costs as a result of reducing the number of civil servants. It assumed the value of one in the years 1991, 1993, 1994 and 2002 when the government implemented the golden hand shake and comprehensive civil service reforms and zero otherwise.

The impact of one standard deviation shock to policy on expenditure downsizing on private investment is presented in figure 3.
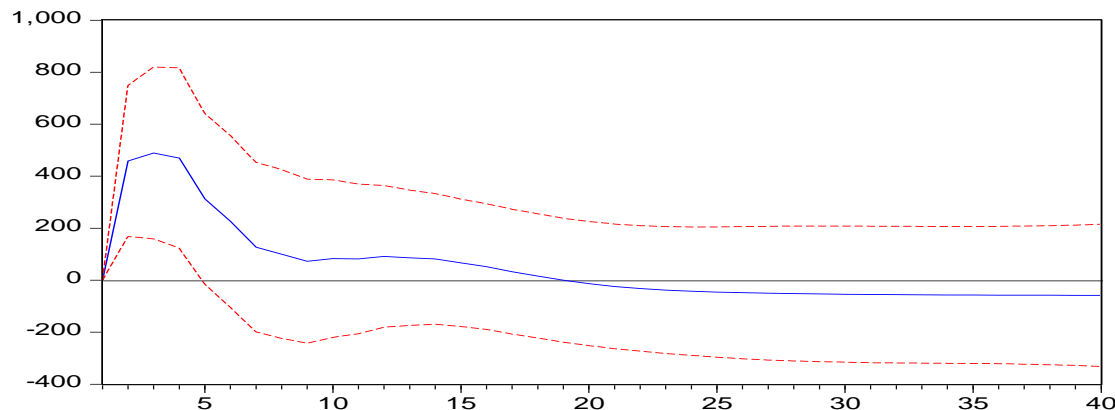

Figure 3: The impact of expenditure downsizing on private investment

The impact of one standard deviation shock on expenditure downsizing on private investment was in both positive and negative territories in the period. The impact was initially an instantaneous positive for the first eighteen semi-annual periods before declining to negative for the remaining period of twenty two semi-annual periods but it never fizzled out. The fact that the impact was in the negative territory and declining for most of semi-annual periods, indicates that expenditure downsizing never promoted private investment. As noted by Mlambo and Oshikoya (1999), policy reversal and lack of commitment to implement civil service reforms never helped to improve the private investment environment. The political bickering surrounding the whole process of retrenchment of civil servants created uncertainty to the investors, and this could be the possible explanation as to why the impact of expenditure downsizing went to the negative territory and actually persisted (Mwakalombo, 2009).

4.5 VARIANCE DECOMPOSITION ANALYSIS

Table 4 shows the decomposition of the variation in private investment into its (significant) component shocks. The results in the table show the variations in private investment in selected periods of the 40 semi-annual periods.

Table 4: The Results of Variance Decomposition of Private Investment

Period	S.E.	PIV	Y	DX	RX	DMY
1	641.86	100.00	0.00	0.00	0.00	0.00
5	1013.59	73.156	6.206	11.066	4.816	4.756
10	1090.07	71.73	6.405	11.615	5.155	5.095
15	1134.88	68.976	7.153	11.953	5.953	5.962
20	1169.17	67.23	7.665	12.175	6.465	6.465
25	1195.93	66.006	7.993	12.343	6.823	6.824
30	1214.26	65.16	8.185	12.475	7.095	7.005
35	1228.01	64.53	8.305	12.595	7.385	7.265
40	1241.44	63.902	8.452	12.702	7.512	7.432

The results show that most of the variations in private investment were due to its own shock at 100 percent in the first semi-annual period. It can be noted that private investment own variation reduced as the periods increased but for other variables the variation to private investment increased. This implies that after the shock to investment its effect increases as the time progress. Therefore time is of essence in evaluating whether government policies are effective or not.

Further observations of the results reveal that development expenditure had a greater impact on private investment compared to recurrent expenditure for the whole period. This implies that much of the government expenditure ought to be incurred towards capital items. In addition, prudent designing of development expenditure is imperative so as to concentrate on those areas that are known to complement private investment. This view was supported by Kahuthu (1999), Seruvatu and Jayaraman (2001) and Kiptui (2005) who noted that public investment was vital in reducing cost of production for the private investors, especially the one directed towards physical infrastructure development since it played complementarity role. The variations to the private investment caused by expenditure downsizing were smallest. Therefore the reforms on expenditure were insignificant for capital formation by private investors.

5. CONCLUSION AND POLICY IMPLICATIONS

The results showed that both development and recurrent expenditure enhanced private investment performance. The impact of development expenditure was felt for short period but that of recurrent expenditure persisted for a longer period of time. The findings further indicated that though government expenditure downsizing had mixed impact, the impact was on downward trend and dwelt for long in the negative territory. This finding led to a conclusion that downsizing of expenditure deterred private investment.

The study concluded that there was need for government to re-allocate funds towards project that are beneficial to the private sector and eschew from those that compete with or crowd it out. In addition government ought to increase its expenditures on those items that enter private production functions as productive public inputs that enhance expansion of private investors' activities. Such productive government expenditure includes expenditure on physical transport and communication infrastructures, health and education facilities, buildings, plant, machinery and equipment, all of which generate positive externalities that raise private investment. In addition, this will increase marginal productivity of the factor inputs and create an enabling environment for private investment. The government should adopt fiscal reforms in the areas that promote investors. The reason behind is that the findings of this study shows fiscal reforms in terms of expenditure downsizing were counterproductive to private investment. Such reforms were expected to

encourage investors because that was a sign of government commitment to prudent financial management. Restraint on part of government in spending public funds lowers budget deficit which means lower taxes in future for investors.

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