# THE EFFECTS OF DEVOLVED FUNDS ON ECONOMIC GROWTH IN KENYA: EMPIRICAL INVESTIGATION (1993-2012)

BY:

MUTIE NZAU

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**ABSTRACT**

The impact of fiscal decentralization on economic growth is a widely debated topic in economic literature. Economists such as Oates (1972) are of the view that fiscal decentralization improves the efficiency of the public sector and it leads to economic growth.

This study analyses the effects of fiscal decentralization with a special focus on decentralized funds on the growth of the Kenyan economy and is based on time series annual data covering the period 1993 -2012. The study has been prompted by conflicting findings from previous studies. The measure of fiscal decentralization that was used in the model is devolved finance (disintegrated in terms of capital finance and recurrent finance).

Ordinary Least Square Method was applied to estimate the parameters of the model. The results show that the variations in economic growth over the study period are sufficiently explained by the variables in the model. Regression results indicate that both decentralized capital finance and decentralized recurrent finance contributes negatively to growth. However; the coefficient of decentralized capital finance is negative but statistically significant considering its t-ratio while the coefficient of decentralized recurrent finance is negative and statistically weak given its t-ratio. This implies that the contribution of devolved funds to economic growth was insignificant during the period under review.
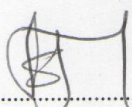
The present study incorporates total government expenditure, trade openness and inflation as control variables. The study has found out that inflation rate has negative and highly significant effect on economic growth. High inflation reduces the efficiency of investments and as such retards economic growth due to high cost of production. The coefficient of total government expenditure was found to be positive and highly significant confirming Wagner's law. The coefficient of trade openness was found to be positive and significant considering its strong t-ratio implying that Kenya's openness to external trade contributed positively and significantly to economic growth of the country during the study period.

It is highly recommended that a constitutional amendment should be done to give counties more taxation powers to improve their internal revenue base. Once this is done, it will reduce the overdependence on the national government by the sub-national governments. Measures should be put in place to open up trade to the rest of the world. Equally important, the government should come up with strategies of controlling the rate of inflation in the country.

It was observed that majority of the devolved funds are matching/conditional grants and as such sub-national governments can do very little to allocate funds to key priority areas within their jurisdictions. A notable example of such conditional grants is the Constituency Development Fund (CDF) which is allocated to constituencies with a pre-determined formula on how to spend the funds neglecting specific needs and priorities in specific areas. As such, it is highly recommended that allocations to counties (sub-national governments) be in the form of unconditional grants.

## DECLARATION

This Research Paper is my original work and has not been presented for a degree in any other university.
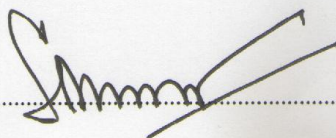
Signed:........................................ Date:...22/10/2014...........

Mutie Nzau      X50/60124/2013

This Research Paper has been submitted for examination with our approval as university supervisors.

Signed:........................................ Date:...24/10/2014............

R.M Kabando

Signed:........................................ Date:...22/10/2014...........

Dr. S.M Nyandemo

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## ABREVIATIONS AND ACRONYMS

ADF..................................Augmented Dickey Fuller

BLUE................................Best Linear Unbiased Estimator

CDF..................................Constituency Development Fund

CDTF...............................Community Development Trust Fund

CEBF...............................Constituency Education Bursary Fund

DDC.................................District Development Committee

ESP..................................Economic Stimulus Programme

FPEF.............................. Free Primary Education Fund

FY................................... Financial Year

GDP............................... Gross Domestic Product

HIV............................... Human Immunodeficiency Virus

IEA................................. Institute of Economic Affairs

IPAR................................Institute of Policy Analysis & Research

KIHBS.............................Kenya Integrated Household Baseline Survey

KIPPRA...........................Kenya Institute of Public Policy Research & Analysis

KKV................................. *Kazi kwa Vijana*

KNBS...............................Kenya National Bureau of Statistics

KPHC...............................Kenya Population & Housing Census

KYEP ..............................Kenya Youth Empowerment Programme

LATF................................Local Authority Transfer Fund

MPND..............................Ministry of Planning & National Development

MTP.................................Medium Term Plan

NPEP................................National Poverty Eradication Plan

OLS................................. Ordinary Least Squares

PEF..................................Poverty Eradication Fund

RDF..................................Rural Development Fund

REF..................................Rural Electrification Fund

REPLF..............................Rural Electrification Programme Levy Fund

RMLF...............................Road Maintenance Levy Fund

SEBF..................................Secondary Education Bursary Fund

SRDP.................................Special Rural Development Programme

WEDF...............................Women Enterprise Development Fund

WMS.................................Welfare Monitoring Survey

WSTF...............................Water Service Trust Fund

UNDP..............................United Nations Development Programme

YEDF...............................Youth Enterprise Development Fund

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**CHAPTER 1**

**1.1 BACKGROUND TO THE STUDY**

The goal of this paper is to explore the relationship between devolved funds and economic growth in Kenya. It is now evident that fiscal decentralization has been entrenched in the Kenya constitution (2010) and that more finances will continue to be decentralized to the County Governments. Given the unquestionable importance of economic growth, the study of the correlation between decentralized finance and economic growth in Kenya is very timely and relevant. In Kenya, the current structure of fiscal arrangements consists of a national government, 47 county governments, and 290 constituencies. With enactment of a new constitution and the subsequent establishment of county governments, Kenya is now fully decentralized fiscally, administrationally and politically. Before the enactment of the new constitution, fiscal decentralization has been in the form of fiscal transfers from the national government to the constituencies and the defunct local authorities. These cash transfers are nowadays called "devolved funds" in Kenya (Medium Term Plan 2008 – 2012, p.135). This renewed interest in fiscal decentralization is probably fuelled by the widespread belief that fiscal decentralization is an effective tool for increasing the efficiency of public expenditures.

The Government of Kenya has been emphasizing on economic growth and development since independence. Rapid economic growth is seen as the key to alleviating poverty in Kenya (Wambugu and Munga, 2009). All core public documents including the National Poverty Eradication Plan (1999 – 2015) and Vision 2030 emphasize rapid and sustained economic growth as a way of alleviating poverty. Attaining high levels of economic growth is one of the chief goals of the government of Kenya (Kenya Vision 2030). In its effort to achieve economic growth and development the Government has over the years embarked on fiscal decentralization strategies with a bias towards devolved finance. The government has been doing this with an aim of achieving the twin objectives of achieving equitable development and addressing poverty in these areas. The expectation has been that with the attainment of these two goals, the resultant effect is economic growth.

As has been observed by Karari (1989), some of the decentralization programs that have been established by the government over the years include the District Development Program of 1966, the Special Rural Program (1969/1970), District Development Planning (1971), the District Focus for Rural Development (1983-1984), and the Rural Trade and Production Centre (1988-1989). Though all these programs had the same noble idea of developing the rural economies and Kenya by extension, they all suffered the same fate-lack of funding by the national government (IEA, 2010)

It is from this background that the government came up with other decentralized funds including Secondary Schools Education Bursary Fund (1993), Road maintenance levy Fund (1993) and HIV/AIDS Fund (1997). Other devolved funds established over the years include: Rural Electrification Programme (1998), Local Authority Transfer Fund (1999), Poverty Eradication Funds (1999), Water Service Trust Fund (2002), Constituency Development Fund (CDF) (2003), Free Primary Education Fund (2003), Youth Enterprise Development Fund (2006) and the Women Enterprise Development Fund (2007). All these funds have been operational from when they were established to the present times although some of them including LATF were abolished in the spirit of the Kenya Constitution (2010).

Records from the National Treasury reveal that there are other short- term programmes which have also led to the flow of funds from the national government to the rural areas. These include the Youth Empowerment Programme/*Kazi Kwa Vijana* funds (15 billion Kenya shillings), *Economic Stimulus Programme* (43 billion Kenya shillings), and the recently launched 6 billion shillings *Uwezo* fund. The Economic Stimulus Program was introduced in the fiscal year 2009/2010 with an objective of initiating various infrastructure projects under health, education, markets, industrial centers and fish enterprise development as well as recruiting nurses and teachers. This program was funded to the tune of forty three billion Kenya shillings (Budget Expenditure Review, 2010/2011). Did the economic stimulus programme for instance stimulate economic growth as was intended?

A glimpse of records from the implementing agencies concerned reveals that these funds have been flowing to the rural areas at an increasing rate. For instance records maintained at the Constituency Development Fund Board shows that CDF allocations to the constituencies

increased from Ksh 1.26 billion ( 2003/2004 financial year ), Ksh 5.6 billion ( 2004/2005 financial year ), Ksh 7.26 billion ( 2005/2006 financial year ) and Ksh 10.038 billion ( 2006/2007 financial year ). The government is mandated to allocate 2.5 per cent of its total revenue to the constituencies as per the CDF Amendment Act (2007). Does the 2.5 per cent allocation translate into economic growth of the same magnitude?

Interestingly, economic surveys and Statistical Abstracts from the Kenya National Bureau of Statistics (KNBS) reveal that the country has recorded wide fluctuations in economic growth (see figure 4 below). What is the relationship between these fluctuations in economic growth and the devolved funds? Another goal of these funds is to bring down the number of the rural poor. Paradoxically, according to the 2009 Kenya population and Housing Census (KPHC), majority of the rural communities of the country are still languishing in poverty. According to economic updates reports from the Kenya National Bureau of Statistics, poverty in some rural areas has been increasing despite the increase in resource allocation to these areas. According to the Kenya Integrated Household Baseline Survey (KIHBS, 2006), 90% of the people in Mandera were living below the poverty line in 2009 compared to 60% in 2006. In 2009, 62% of the people of Malindi were considered poor compared to 61% in 2006. The survey also revealed that in 2009, 83% of the people of Galole were living below the poverty line compared to 42% in 2006. However, the survey revealed that there was a marginal reduction of the number of the poor in Budalangi from 70% in 2006 to 69% in 2009. Rural poverty increased from 46% in 1992 to 46.80% in 1994 to 52.90% in 1997(1992 WMSI, 1994 WMS I, 1997 WMS III). The situation worsened further in the year 2000 because Mwabu *et al* reports that rural poverty incidence was 59.60%. The 2005/06 KIHBS however reported a slight decrease in the incidence of rural poverty because according to this report only 49.10% of the rural populace was living below the poverty line in the year 2006.

Generally, about 50% of the population in Kenya cannot meet the minimum levels of basic needs and thus live in poverty (KIPPRA, 2011). One of the major arguments for decentralized funds is to address the problem of inequality in the country. However, available estimates of the Ginni coefficients for Kenya show that inequality has been increasing in the country. According to the available household surveys, the country's Ginni based on households income was estimated at

0.419 in 1997 compared to 0.459 in 2005/06. Although the population living in poverty has declined, the number of those living below the poverty line is estimated to have increased from 13.4 million in 1997 to about 16.6 million in 2006 ( KIPPRA, 2009). The Ginni coefficient increased slightly from 0.419 in 1997 to 0.459 in 2005/06 implying increased inequality.

The success of fiscal decentralization can be measured by investigating the rate of flow of resources from the central government to the sub-national governments (Macharia, 2008). It is based on this argument that this paper tries to explore the extend of fiscal decentralization in Kenya by looking at the magnitude of decentralized funds and later on exploring at the relationship between these funds and economic growth in Kenya. To be able to establish the relationship between decentralized funds and economic growth in Kenya, this study has made use of a growth regression whereby the ratio of devolved funds as fraction of the total government spending is our variable of interest. Other variables (control variables) used in the model include: total government expenditure, the rate of inflation and openness and the ratio of local authority revenue as a fraction of the total national revenue. Ideally, many other factors including the overall fiscal balance for the country affect economic growth. As such a stochastic model has been used to determine the impacts of these other factors on economic growth.

Although there is a paucity of empirical evidence on the relationship between devolved funds and economic growth in Kenya, there is plenty of information concerning the relationship between the two variables at the international level. Many studies have been conducted in fast decentralizing economies like Spain, South Africa and Mexico with conflicting results. Other studies have been conducted in the U.S.A, China, India and Pakistan leading to a mixture of results. Some studies have shown that fiscal decentralization positively influences growth; others have revealed that fiscal decentralization can negatively affect economic growth where as others have concluded that there is no relationship at all between the two variables.

The Kenyan constitution (2010) established devolved governance structures called county governments. It goes without saying that with the new constitutional dispensation, more funds will continue trickling in the rural areas. The National government must be prepared to spend funds on the counties. It is therefore important to investigate the impacts of devolved finance on the overall country's growth. It is only by doing so that policy makers can be able to know the

percentage change in growth that will be attained as a result of the government's decision to devolve an extra shilling in these counties. There has been a debate mostly in the political arena as to what fraction of the national revenue is to be devolved in the counties. Although the Kenyan Constitution (2010) fixes it at a minimum of 15%, majority of the county politicians ranging from the governors, senators and even members of parliament have been trying to push it up to a minimum of 40%. The current attempt by Governors to organize a National Referendum duped *pesa mashinani* is a clear manifestation of this. Moreover, the Kenya Vision 2030 envisages a 10% growth rate by 2030. This study seeks to determine whether a shilling spent at the devolved level (county level) is more growth-enhancing than a shilling spent at the national level. The paper therefore seeks to determine whether devolved finance has had any significant impact on economic growth in Kenya.

While analyzing the devolved funds, special emphasis was made on the highly praised and publicized Constituency Development Fund (CDF).The research has used time series data for the period 1993-2012.

Fiscal decentralization was entrenched in the Kenya constitution (2010) which also saw the establishment of 47 county governments. Definitely, this will lead to a substantial increase in the rate of flow of decentralized funds to the rural areas. Is this increase in decentralized funds going to hinder or spur growth? This paper sought to answer this question. To be able to answer this very important question, this paper provides an analysis of Kenya's economic performance in the past considering the government allocation patterns of decentralized funds. The findings of this study therefore serves as a pointer as to whether county governments will contribute towards the overall country's economic growth or not.

The findings of this research will benefit policy makers in the national government, county governments, the academia and other stakeholders in development particularly those that engage themselves in rural projects/programmes.

Time series data for the period 1993 to 2012 was obtained from the printed estimates on the governments recurrent and capital/development expenditure, government expenditure review

reports, economic surveys and statistical abstracts. These documents were obtained from the Ministry of Devolution and Planning, Central Bureau of Statistics and the National Treasury.

## 1.1.2 GOVERNMENT EXPENDITURE PATTERN

Table 1 below gives the budget estimates for the government of Kenya for the fiscal year 1993/94 – 2012/2013.

**Table 1: Government Expenditure (Ksh Million)**

| Fiscal Year | Total Expenditure | Development expenditure | Recurrent expenditure | % Growth in GDP |
|---|---|---|---|---|
| 1993/94 | 165,565.74 | 20,455.50 | 145,110.24 | 2.6 |
| 1994/95 | 174,876.25 | 22,587.50 | 152,288.75 | 4.4 |
| 1995/96 | 183,592.40 | 27,683.66 | 155,908.74 | 4.1 |
| 1996/97 | 156,898.60 | 26,843.90 | 183,742.50 | 0.5 |
| 1997/98 | 313,373.78 | 24,074.58 | 289,299.20 | 1.6 |
| 1998/99 | 243,335.47 | 20,249.70 | 223,085.77 | 1.5 |
| 1999/00 | 225,137.88 | 19,578.85 | 235,065.96 | 0.4 |
| 2000/01 | 268,430.49 | 33,364.53 | 235,065.96 | 0.6 |
| 2001/02 | 310,667.57 | 27,817.58 | 282,849.99 | 4.7 |
| 2002/03 | 306,648.95 | 32,530.49 | 274,118.46 | 0.3 |
| 2003/04 | 376,312.00 | 54,557.96 | 321,754.04 | 2.8 |
| 2004/05 | 379,830.23 | 40,140.95 | 339,689.28 | 4.6 |
| 2005/06 | 477,122.65 | 83,916.50 | 393,206.16 | 6.3 |

| 2006/07 | 508,667.47 | 106,839.81 | 401,827.65 | 7.0 |
|---------|------------|------------|------------|-----|
| 2007/08 | 665,376.41 | 159,941.04 | 505,435.37 | 1.5 |
| 2008/09 | 696,972.08 | 163,665.09 | 533,306.99 | 2.7 |
| 2009/10 | 865,619.934 | 258,904.21 | 606,715.72 | 5.8 |
| 2010/11 | 996,825.02 | 321.231.88 | 675,593.14 | 4.4 |
| 2011/12 | 956,900.00 | 398,551.22 | 558,348.78 | 4.6 |
| 2012/13 | 1,459,900.00 | 458,128.00 | 1,001,772.00 | 5.7 |

**Source: Statistical Abstracts, KNBS- Various issues**

**Figure 1: Government Expenditure, 1993/94 – 2012/13**
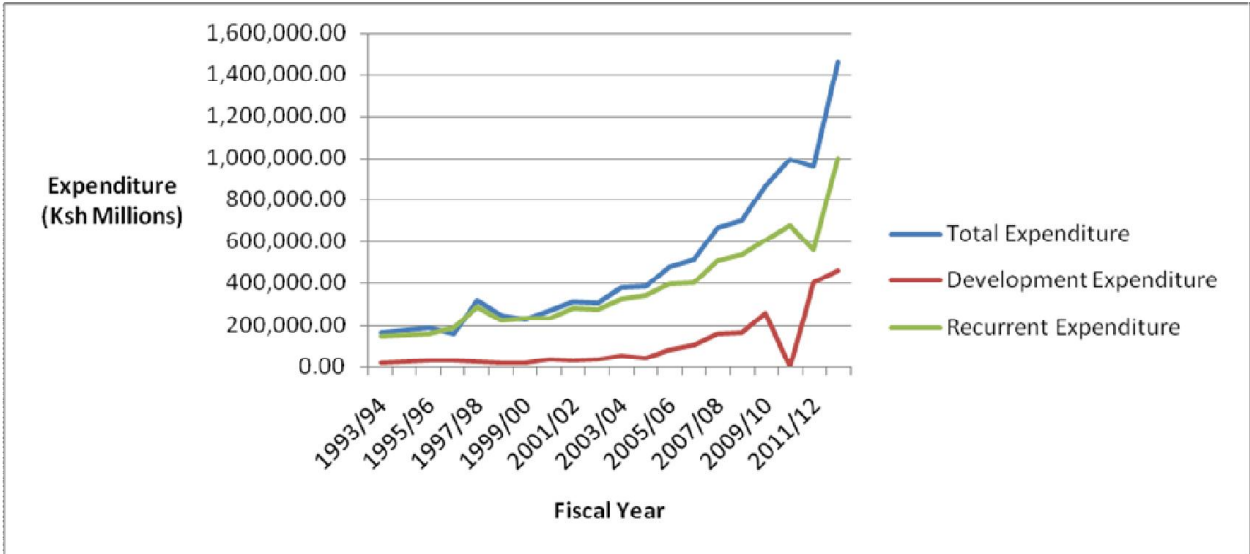


**Source: Author's own computation based on recurrent and development budget estimates.**

As can be depicted in the figure above the government has been increasingly spending its resources, with recurrent expenditure taking the lion's share of the budgets.

## 1.1.3 HISTORICAL BACKGROUND OF FISCAL DECENTRALIZATION IN KENYA

This section provides an over view of the historical development of devolved funds in Kenya.

Fiscal decentralization can be traced back to the independence period, particularly the *majimbo* system and the sessional paper No 10 of 1965 entitled "African Socialism and its application to planning in Kenya". Mwenda (2010) observes that there are four main principles that guide decentralization. These are expenditure responsibilities, revenue assignment, intergovernmental fiscal transfers and sub-national government borrowing. Kenya came up with a new constitution which was promulgated in the year 2010 and fiscal decentralization is integrated in this constitution. Before the country prepared a new constitution, fiscal decentralization used to operate at the local authority level. Local Authorities used to be governed by the local Authority Act Cap 265 of the laws of Kenya. It is this Act that established the Local Authority Transfer Fund (LATF).

Apart from LATF, other funds were established under different statutes and are managed by different government institutions. These include: Roads Maintenance Levy Fund (RMLF), Constituency Development Fund (CDF), the Constituency Education Bursary Fund (CEBF), the Free Primary Education Fund (FPEF), and the Rural Electrification Programme Fund (REPF) among others.

Fiscal decentralization in Kenya has been supported by three main frameworks. These are the Rural Development Fund, Special Rural Development Programme (SRDP) and the District Focus for Rural Development (Menon, Mutero & Macharia, 2008). Rural Development Fund (RDF) was well matched to decentralized planning and was set up in 1974.

RDF had two objectives which were: Encouraging self-help development initiatives through financial and technical support and encouraging employment in the rural areas through public works construction. To do this, financial support was channeled to the DDCs to complement other resources for local development. The government of Kenya was encouraging the development of small-scale production projects which make efficient use of resources. These projects offer potential for generating new jobs and increasing rural incomes. The government was particularly interested in helping rural people establish small scale economic activities such

as cattle rearing, and poultry and pig rearing. These projects have a high labor absorption capacity and combine a high income generating potential with low demand on land (Wambugu & Munga, 2009).

The District Focus for Rural Development (DFRD) on the other hand was initiated in 1983 (Mwirabua, 1989). Sessional paper No.1 of 1986 established a policy that development should be oriented towards those activities which generate employment and promote growth of incomes.

Fiscal decentralization has been there in Kenya since independence although at a low scale since it was not entrenched in the constitution. During these times the *majimbo* system had been granted a lot of recognition and responsibilities to the regions earlier on referred to as provinces. The system had given powers to local authorities to collect taxes and the responsibility for the maintenance of schools, health centers and minor roads (Chitere and Ireri, 2008). To avoid any conflicts due to departure from *majimbo* system, the government demonstrated its commitment to local planning and development management through the establishment of development committees at the district and the provincial levels (Maina, 2005). The chief role of these committees was to coordinate development activities at the districts and the provinces. According to the sessional paper No.10 of 1965 on African socialism and its applications to planning in Kenya planning was to be taken further to the provinces, districts and municipalities. The paper classified provinces either as developed or underdeveloped. It is amazing because some regions which used to be classified as underdeveloped 50 years ago are still classified as marginalized. The 1966-1970 National Development Plan (NDP) was prepared based on this paper. The 1966-1970 NDP focused on developing a few sectors of the economy and as such, it was seen to be unsustainable. Following this, the government revised its development strategy by focusing on the development of rural areas to achieve sustainable economic growth through improved education levels and creation of employment opportunities. This gave birth to two policy documents which were meant to accelerate growth of the rural areas. These are: Special Rural Development Programme (SRDP) and District Planning. The two policies later on lead to the birth of the District Focus for Rural Development (DFRD).

The Special Rural Development Programme (SRDP) was established in 1971 and was aimed at combating unemployment and poverty levels in the rural areas which were then viewed to be

alarming. The SRDP was managed by the Ministry of Finance and was coordinated by a central committee duped the National Rural Development Committee (NRDC). The NRDC worked through the district and provincial development committees. SRDP formed the basis for decentralized planning and provided the basis for the development of district planning systems. It further led to the establishment of District Development Committees (DDCs) and the Rural Development Fund (IPAR, 2004).

To ensure effective coordination of the programme, the Kenyan government established the Rural Planning Directorate which is nowadays under the Ministry of Devolution and Planning. The directorate promotes rural development through appropriate policies, programmes and projects that enhance capacity for growth and facilitates effective decentralization of planning and budgeting from the sector ministries to the districts. To achieve this District Development officers coordinate the preparation of District Development Plans (DDPs), District Poverty Assessment Reports, the Medium Term Expenditure Framework (MTEF), and the District Socio-economic Profiles (government of Kenya, 2009).

The DFRD was established in 1983 and led to the establishment of the positions of a District Development officer (DDO) in the civil service. DFRD also led to the establishment of the District Development Committees (DDCs), and pointed out that it was important to make the district the focal planning unit (Chitere and Ireri, 2008). The DFRD has been guiding planning, budgeting and financing at the local and national levels until 2012 when the County governments became operational. The focus of development is now shifting from the districts and constituencies to the counties though some of the devolved funds such as CDF are still being managed at the constituency level.

Until recently, fiscal decentralization was not integrated into the Kenyan constitution. Without constitutional backing, fiscal decentralization in Kenya has been relying on the enactment of laws in parliament and executive directives. One such law is the CDF ACT of 2003 and its subsequent amendment Act of 2007. The CDF Act led to the establishment of the Constituency Development Fund (CDF). The Kenyan constitution (2010) established constitutional devolved units known as county governments and this is expected to shape the future of fiscal decentralization in Kenya. This is because apart from fiscal decentralization, the constitution of

Kenya (2010) decentralized political and administrative powers to the counties as well. However, it should be noted that for effective fiscal decentralization, the three forms of decentralization (fiscal, administrative and political power) should be properly integrated as noted by KIPPRA (2011).

Ministry of Local Government (2004) observes that local authorities had no capacity to finance their budget commitment and as such it was imperative to have intergovernmental fiscal transfers to finance the deficit. As such the central government came up with two major fiscal transfer grants i.e LATF and the RMLF. Other funds which the government established over the years include: Constituency Development Fund, Free Primary Education Funds, HIV/AIDS fund, Constituency Bursary Education Fund, Rural Electrification Fund and Poverty Eradication Fund. Others are Youth Enterprise Development Fund and the Women Enterprise Development Fund though these two operate as revolving loan funds.

### 1.1.4 ALLOCATION OF DECENTRALISED FUNDS IN KENYA

This section briefly discusses the various devolved funds in Kenya and focuses more on the yearly allocations; with an intention of assisting the reader understand the trend of the flow of these critical resources to the rural areas.

The following table shows how the various devolved funds have been flowing to the rural areas.

**Table 2: Gross Domestic Product and devolved funds measured in ksh millions per year**

| YEAR | GDP (Ksh M) | GDP Growth (% Δ) | INFL | CEBF | RMLF | REF | LATF | PEC | CDF | FPEF | YEDF | WEDF | ESP | KKV/KYEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993/94 | 456,430 | 2.6 | 45.98 | 170 | 4,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994/95 | 528,110 | 4.4 | 28.81 | 175 | 5,430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995/96 | 614,270 | 4.1 | 1.554 | 210 | 5,510 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996/97 | 688,000 | 0.5 | 8.86 | 225 | 6,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997/98 | 770,310 | 1.6 | 11.92 | 225 | 4,790 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998/99 | 850,810 | 1.5 | 6 | 250 | 5,025 | 750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999/00 | 906,930 | 0.4 | 7 | 250 | 6,010 | 675 | 1,000 | 100.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000/01 | 967,840 | 0.6 | 3.3 | 536 | 6,600 | 550 | 2,300 | 101.4 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001/02 | 1,025,920 | 4.7 | 2 | 536 | 7,800 | 850 | 3,000 | 113.67 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002/03 | 1,038,760 | 0.3 | 9.8 | 548 | 7,700 | 972 | 3,000 | 117.22 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003/04 | 1,141,780 | 2.8 | 11.6 | 771 | 9,000 | 1,502 | 3,750 | 103.08 | 1,260 | 4,505 | 0 | 0 | 0 | 0 |
| 2004/05 | 1,273,980 | 4.6 | 10.3 | 800 | 8,700 | 1,798 | 4,000 | 109.65 | 5,600 | 7,514 | 0 | 0 | 0 | 0 |
| 2005/06 | 1,415,820 | 6.3 | 14.5 | 928 | 9,300 | 1,945 | 5,000 | 120 | 7,260 | 7,441 | 1000 | 0 | 0 | 0 |
| 2006/07 | 1,622,590 | 7.0 | 9.8 | 550 | 15,400 | 2,025 | 7,500 | 125.78 | 9,735 | 7,605 | 725 | 1000 | 0 | 0 |
| 2007/08 | 1,833,510 | 1.5 | 26.2 | 478 | 18,300 | 2,450 | 8,250 | 129.71 | 9,797 | 7,808 | 500 | 215 | 0 | 0 |
| 2008/09 | 2,111,170 | 2.7 | 10.5 | 678 | 19,000 | 3,350 | 9,250 | 129.45 | 9,797 | 7,678 | 541 | 440 | 0 | 0 |
| 2009/10 | 2,365,450 | 5.8 | 4.1 | 870 | 19,990 | 3,580 | 10,400 | 135.35 | 11,959 | 5,609 | 550 | 390 | 22,000 | 5,000 |
| 2010/11 | 2,551,160 | 4.4 | 14 | 500 | 20,500 | 3,760 | 12,300 | 143.37 | 13,855 | 6,427 | 412.5 | 390 | 21,000 | 0 |
| 2011/12 | 3,000,160 | 4.6 | 9.4 | 840 | 20,943 | 3,600 | 17,300 | 145 | 16,989 | 7,383 | 399.5 | 246.4 | 0 | 491 |
| 2012/13 | 3,548,300 | 5.7 | 10.63 | 890 | 20, 680 | 3,850 | 20,600 | 147 | 19,055 | 8,787 | 298 | 133.8 | 0 | 0 |
| 2013/14 | 4,116,580 | 4.7 | 5.21 | 895 | 21,500 | 4,150 | 0 | 137.49 | 23,100 | 8,907 | 1000 | 1000 | 0 | 0 |
| Totals | | | | 11,325 | 222,498 | 35,807 | 107,650 | 1,858.62 | 128,407 | 79,664 | 5,426 | 3,815.2 | 43,000 | 11,325 |

**Source: Statistical Abstracts – Various issues**

**The local Authority Transfer Fund (LATF)**

The Local Authority Transfer fund was established in 1998 via the Local Authority Transfer Act No.8 of 1998. The LATF was initially capitalized with 2% of the national income tax during its first year of operation ( FY 1999/2000) but has since been receiving 5% of the national income tax as stipulated by the LATF Act (Republic of Kenya-LATF Annual Report -2003/2004, page 5). The LATF Act specifies that 5% of the National Income tax should be allocated to LATF of which 0.5% should be administered to the costs of managing the fund. Disbursement of LATF to local authorities used to be based on an objective and a transparent formula.  The formula made use of population size as the criteria for allocating the funds to the local authorities. According to various recurrent and development  expenditure budget estimates for Kenya, the fund has grown from Ksh I billion (1999/2000), ksh 2.3 billion ( 2000/2001), Ksh 3 billion ( 2001/2002), Ksh 3 billion ( 2002/2003), Ksh  3.75 billion ( 2003/2004), Ksh 4 billion ( 2004/2005), Ksh  5 billion ( 2005/2006), Ksh 7.5 billion ( 2006/2007), Ksh 8.25 billion ( 2007/2008), Ksh 9.25 billion ( 2008/2009), Ksh 10.4 billion ( 2009/2010), Ksh 12.3 billion ( 2010/2011) and Ksh 17.3 billion (2011/2012).

In summary, a total of over Ksh 87 billion had been allocated and disbursed to the local authorities by 2011/2012 financial year. LATF continued to be the main fiscal transfer mechanism to local authorities channeling significant resources to the local level and at the same time providing a framework for the facilitation of performance improvement (Page 99 of the Kenya Economic Survey, 2010). Figure 2 below shows the trend of the LATF yearly allocations

**Figure 2: LATF Allocations, 1999/00 - 2012/13**
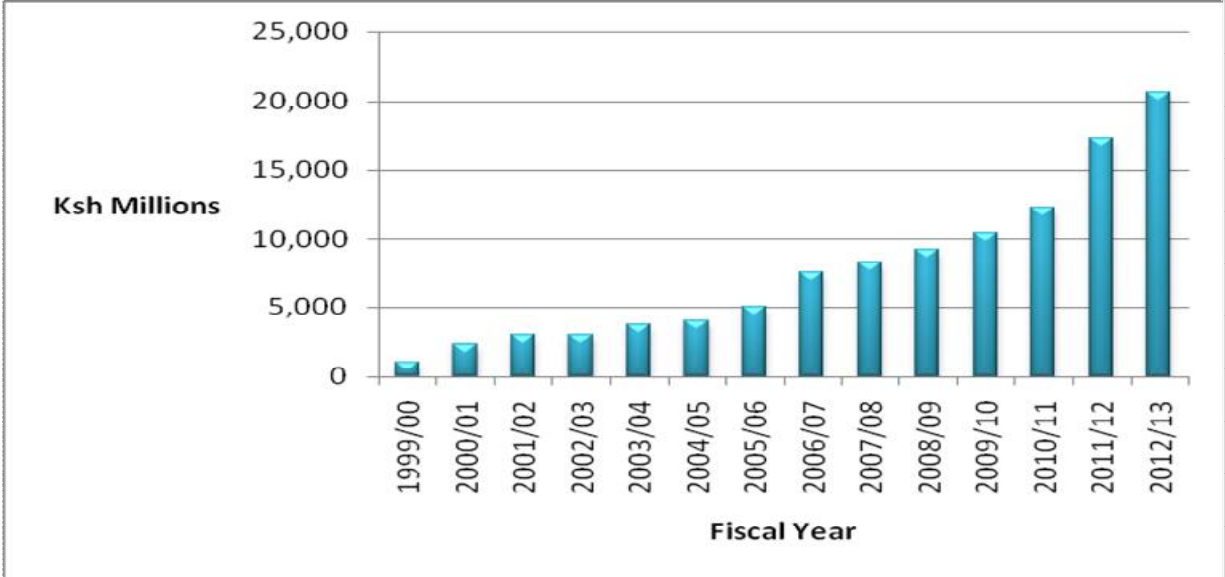


**Source: Author's own computation based on recurrent and development expenditure budget estimates.**

The above chart shows that LATF allocations have been increasing over the years.

**Constituency Development Fund**

The constituency Development Fund was established through the CDF Act No. 11 of 2003 as amended by the CDF amendment Act of 2007. The main objective of the fund is to ensure that at least 2.5% of the government revenue is devolved to the constituencies for purposes of bringing development at the grass roots. The fund targets constituency-level development projects with an aim of reducing poverty in the rural areas. It further aims at promoting equity in sharing of national resources by reducing imbalances in regional development. As such, the fund allocation is based on the constituency poverty indices and population figures.

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According to the records maintained in the CDF board, the national government has been allocating funds to the constituencies since the year 2003.The following chart (Figure 3) shows an upward trend in the allocation of funds to the CDF kitty.

**Figure 3: CDF Allocations, 2003/04 – 2012/13**
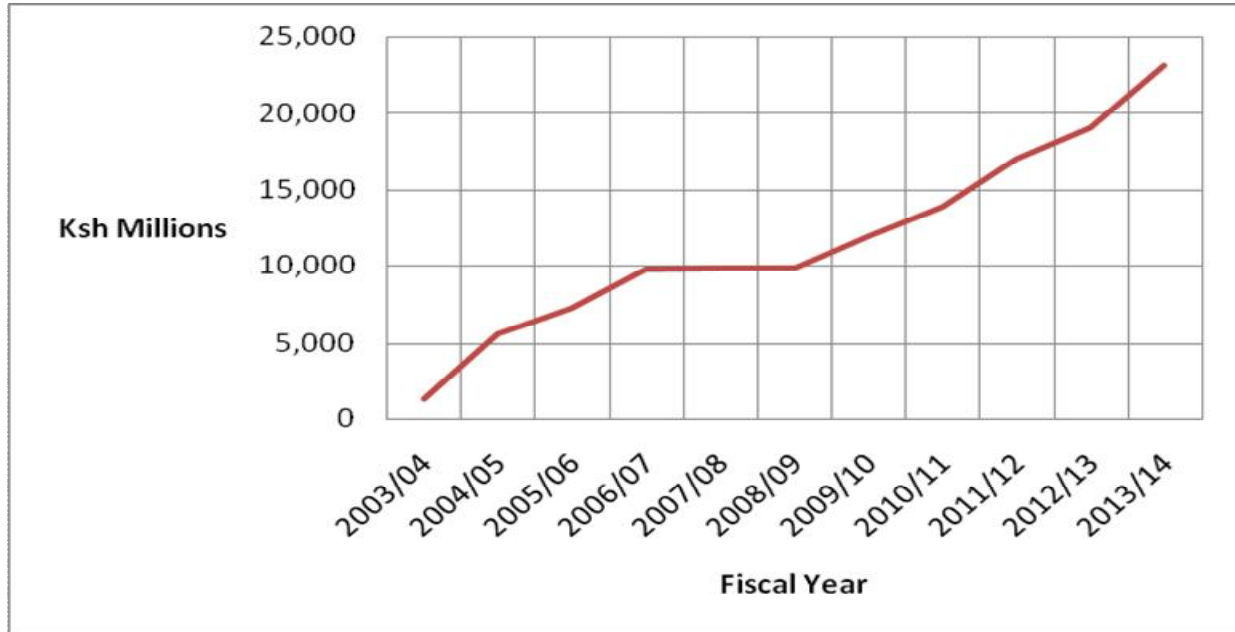


**Source: Author's own computation based on Statistics from the CDF Board**

While these yearly allocations might not appear to be much, its impact both physically and socially have been substantial (Bagaka, 2008). From table 1 above, it is evident that a total of over 106 billion Kenya shillings had been devolved to the constituencies by the 2012/2013 financial year. Through the CDF many facilities in the health, water, security, energy and education sectors have been put up and equipped. Using CDF, rural infrastructure has been improved and many roads that would otherwise be impassable are now usable throughout the year. It should be noted that public spending in critical sectors such as security, roads and energy has got forward linkages (Wanjala & Kiringai, 2007). Government expenditure in these sectors usually results to a favorable business and investment opportunity and the resultant effect is economic growth.

**The Free Primary Education Fund**

This fund was established in 2003 with an objective of ensuring quality and affordable basic education in Kenya. The fund targets at achieving universal primary education for all by 2015. This is one of the Millennium Development Goals. Every year Ksh 1,020 are allocated for each child in all the public primary schools in Kenya. Out of the Ksh 1,020, Ksh 650 is meant for the purchase of teaching and learning materials. The rest ksh 370 is used for general purpose expenses such as operations and maintenance of school equipment. One of the main weaknesses of the FPE policy framework is that it was not established through legislation like CDF and LATF. As such FPE funds are not pre-determined like CDF and LATF. As has been noted by IEA (2010) the existence and the size of the FPE funds depend on the good will of the executive. Another short fall of this fund is that the allocation per child (Ksh 1,020) has not been revised since the year 2003. This means that the fund is not inflation responsive and as such school heads are constrained in looking for alternative ways to meet the budget deficit.

**The Constituency Education Bursary Fund (CEBF)**

This fund was established during the 1993/1994 financial year through a presidential degree. The main target of the fund was retaining bright students from poor families in schools. As such, the fund aimed at minimizing inequalities that were seen to be exacerbated by unequal access to education facilities. Over 11 Billion Kenya shillings have been spent on this programme since its inception (KNBS, 2012). Such kind of spending on education in an economy can increase the human capital in the labor force which increases labor productivity and thus leads to a higher equilibrium level of output. It can also increase the innovative capacity of the economy-knowledge of new technologies, products and processes promote growth (World Bank, 2007).

Unlike the CDF and LATF, allocation of CEBF is not based on a fixed share of the national revenue but instead depends on the annual vote for the Education Ministry. The National government allocates the funds to the constituencies depending on the constituencies' poverty indices and the secondary schools enrolment rates. Equally important, the fund does not operate under a legal framework like CDF and LATF. This means that the fund has been operating under the mercy of the executive.

**The Rural Electrification Programme Levy Fund (REPLF)**

This fund was established in 1998 through an Act of parliament, the Electric power Act of 1997.This fund was meant to connect the rural and marginalized communities to the national grid. Various institutions play a participatory role in ensuring that rural areas are electrified. This institutional framework comprises of the Ministry of energy, the Energy Regulatory Commission (ERC), and the Kenya Power & Lighting Company (KPLC). Just like the CDF, this fund operates under a legal framework and as such this enhances its sustainability.

**The Roads Maintenance Levy Fund (RMLF)**

RMLF was established in 1993 via the Roads Maintenance Levy Fund Act. The RMLF are raised from the revenue raised from fuel levies from petroleum products and transit toll collections. The main objective of the fund is to ensure that public roads including local authority unclassified roads remain motorable. The fund targets the maintenance of roads under the Ministry of Roads and Public Works. The Roads Maintenance Levy Fund Act established District Roads Committees to oversee roads maintenance and improvements in the Districts (Sub-counties).

It should be noted that only 16% of the total fuel levy collections goes to the rural roads. The rest of the funds go to international roads and secondary roads. To ensure that the allocation of funds in the constituencies does not depend on political patronage, the Act provides that the funds be shared equally among all the constituencies.

**The Youth Enterprise Development Fund**

This fund was established by the government in 2006. Its main target is to reduce unemployment among the youth by engaging them in productive activities. Using credit provided by the fund the youths are expected to engage themselves in economically viable activities. To date the fund has advanced loans worth over 5 billion Kenya shillings to youths. It should be noted that the fund is a revolving one and as such the cumulative amount advanced as loans is more than the Treasury allocations. One of the objectives of the fund is to provide loans to youth owned enterprises. The fund also aims at providing business development services to youth enterprises as well as facilitating the youth in the international labor market.

**Poverty Eradication Funds**

The early 1990s saw a rise in poverty levels and deterioration of various welfare gains achieved between independence and the 1980s. The intensified efforts by the government to combat this phenomenon can be traced back to the World Summit for Social Development (WSSD) held in Copenhagen in 1995 and attended by more than 100 world leaders including the then head of state for Kenya, and whose declaration focused on eradication of poverty.

The WSSD declaration motivated the Kenya government to formulate its own National Poverty Eradication Plan (NPEP, 1995) for the fight against poverty. The primary objective of NPEP was to reduce the proportion of households leaving below the poverty line from 47% in 1994 to 24% by 2015 (MPND, 2006).

## 1.1.5 KENYA'S ECONOMIC PERFORMANCE FOR THE PERIOD 1993/94 – 2012/13

Despite the increasing levels of the general government expenditure and the increasing levels of decentralized funds, Kenya has taken a zigzag economic growth path as can be depicted in figure 4 below.

**Figure 4: Economic Growth Rates, 1993/94 – 2013/14**
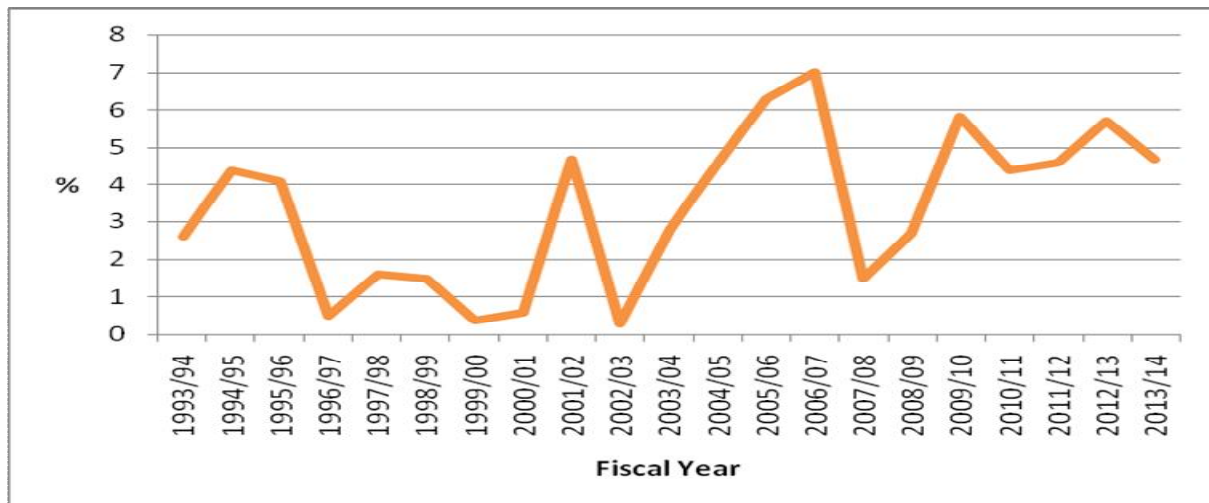


**Source: Author's own computation based on statistics from the Kenya National Bureau of statistics.**

## 1.2 STATEMENT OF THE PROBLEM

The government of Kenya has been emphasizing on the importance of fiscal decentralization since independence. The first Medium Term Plan of the Vision 2030 for instance observes that "while the country awaits for the implementation of new devolution structures from the proposed constitution, the government's position is that fiscal decentralization measures can still be taken in the interest of growth with equity" (Medium Term Plan 2008 – 2012, p. 135). During the 2009/2010 budget speech, the government through the minister for finance emphasized the importance of decentralized finance to development. When he was reading the budget speech, the minister had this to say "a 22 billion Economic Stimulus Programme will be channeled to the rural areas to jump-start the economy using the CDF model" (2009/2010 budget speech). Did the Economic Stimulus Programme stimulate growth as was intended?

The country has seen a significant increase in the amount of funds decentralized to the local authorities, districts and constituencies in the past two decades. As a matter of fact over 17 billion Kenya shillings are devolved annually (KNBS, 2012). For example in the fiscal year 2011/2012 alone, 17 billion Kenya shillings was decentralized through the CDF model where as 17.3 billion Kenya shillings was devolved through the LATF kitty, translating to 34.3 billion Kenya shillings ( KNBS, 2012). This translates to 1 per cent of GDP in the 2011/2012 fiscal year. In the financial year 2011/2012 the total government expenditure amounted to 1,024.7 billion Kenya shillings. This means that the amount of funds devolved through CDF and LATF channels alone represented 3.35 per cent of the national budget.

Many studies on the relationship between devolved finance and economic growth have been conducted mostly at the international level. For example, Lin and Liu (2000) using Chinese data applied an econometric model and found out that fiscal decentralization should result to 3.62 per cent increase in per capita GDP. Therefore, the fact that the rate of decentralizing finance in Kenya has been increasing coupled by the fact that fiscal decentralization has been entrenched in the Kenya constitution (2010) calls for a closer examination between devolved finance and economic growth and constitutes an issue warranting research.

## 1.3 OBJECTIVES

The general objective of this study is to determine whether devolved funds have had any significant impact on economic growth in Kenya.

The specific objectives are:

1. To establish whether there is any relationship between devolved funds and economic growth in Kenya.

2. To establish the magnitude of the relationship between the devolved funds on GDP in Kenya.

3. To make policy recommendations from the findings of the study.

## 1.4 RESEARCH QUESTIONS

The research questions for this study are:

1. What is the relationship between devolved funds and economic growth in Kenya?

2. What is the effect of devolved funds on GDP?

3. What are the policy implications of the findings from the study?

## 1.5 JUSTIFICATION

Over the past few decades most developing countries and transition economies have either embarked upon or stated their intention to embark on some form of fiscal decentralization initiative. Kenya is not an exception. Often, one of the stated policy objectives of fiscal decentralization is to foster economic growth. However, a keen review of the existing empirical literature has revealed that various scholars have found a mixed relationship with some finding a positive relationship, others negative relationship and others no relationship at all.

Fiscal decentralization has been integrated in the Kenya constitution 2010 and the country is now decentralized politically, administrationally and most importantly fiscally. One of the best practices in the design of a devolution framework is the assignment of the revenue responsibility

to the national and sub-national governments. The national government of Kenya has been assigned a tax responsibility over most of the taxes with sizeable tax bases including value added tax, excise tax, custom duties and income tax (Constitution of Kenya, 2010). The four taxes combined constitute approximately 91% of the national revenue collected by the national government (IEA, 2012). The county governments on the other hand have been assigned responsibility over taxes with narrow bases such as property and entertainment taxes. The counties are therefore offered with little scope to raise their own revenues meaning that the counties will continue relying on the national government to facilitate them with resources to finance their budgets. This failure by the constitution to give counties proper taxing powers can partly explain the desperateness we are observing in some counties where by some counties have been reported to have come up with contentious taxation laws whereby the dead are even taxed.

These broad-based and ambitious policy agendas call for a closer examination of the potential relationship between devolved finance and economic growth in Kenya since the impact of devolved funds on economic growth in Kenya has received very little attention from scholars. Given the unquestionable importance of economic growth, the study of the relationship between devolved finance and economic growth in Kenya is therefore very timely and relevant. The results of the current paper will provide policy makers, economists, planners and the academia with some useful information on the economic implications of the devolution framework established by the constitution of Kenya (2010).

## 1.6 SCOPE

The central focus of this paper is to establish the relationship between fiscal decentralization (with a focus on devolved funds) and economic growth in Kenya. This paper considers the ratio of devolved funds as a fraction of the total government spending to be the chief indicator of fiscal decentralization in Kenya. The other measure of fiscal decentralization used in this paper is the local authority revenue as a percentage of the total national revenue. The paper has used time series data for the period 1993 – 2012.

**CHAPTER TWO**

**2.0 LITERATURE REVIEW**

This chapter presents a review of the relevant literature. The theoretical literature is first presented followed by the empirical literature. Devolved finance constitutes an important component of fiscal decentralization as has been noted by Amagoh and Amin (2012) and as such, this paper has relied on fiscal decentralization theory.

**2.1 THEORETICAL LITERATURE REVIEW**

Economic literature on federalism and decentralization in Economics is informed by fiscal federalism theory. The theory of fiscal federalism identifies numerous advantages in transferring powers, responsibilities and resources to lower levels of government. Decentralization enhances welfare since the preferences of citizens vary across jurisdictions. This is done by matching government output to local tastes and increasing efficiency both in providing government services and in generating revenue (Richard Musgrave 1959; Oates 1972)

**2.1.1. FISCAL DECENTRALIZATION AND ECONOMIC GROWTH**

Fiscal decentralization can be defined as a two-dimensional policy institution that involves either decentralization of a tax instrument, when local governments have the power to raise taxes, or decentralization of expenditures when local governments bear the responsibility for implementing expenditure functions (Francesco Porcelli, 2009). Hamid Davoodi and Heng-fu Zou (1997) argues that the best measure of fiscal decentralization is the sub-national share of total government spending. The higher is this measure, the higher is the rate of fiscal decentralization

The literature on the link between fiscal decentralization and economic growth can be aligned into two opposing camps: those that tend to highlight the positive connections between both factors and those that dwell on the negative aspects. Economists such as Musgrave (1958), Tiebout (1956) and Oates (1972) are all seen to be proponents of fiscal decentralization. They all argue that fiscal decentralization promotes higher efficiency, better public service, greater transparency and eventually economic growth.

Further, decentralized expenditures may lead to greater consumer efficiency (Thieben, 2003). Martinez-Vazguez and McNab (2003) observes that various sub-national governments are faced with different demands and as such resources can be saved by diversifying governments' outputs in accordance with local demands. It is possible to match the preferences of the local people and those of local governments because of population mobility and competition among local governments for the delivery of public services (Tiebout, 1956).

Local governments are thus considered to be better equipped to provide adequate services to the local population than the central governments (Tiebout, 1956, Ebel and Yilmaz, 2002). Fiscal decentralization may thus improve not only the potential for achieving Pareto efficiency, but also for achieving greater economic equality across territories (Oates Wallace E, 2006). Tiebout (1956) and Thieben (2003) have observed that fiscal decentralization is likely to enhance horizontal and vertical competition at the local and regional level. This leads to the efficient production of public goods by governments and limits the capacity of bureaucrats to act as revenue maximizers.

According to Martinez-Vazguez and McNab (2003), fiscal decentralization may improve resource allocation, foster market development and consequently lead to promotion of economic growth. Equally important, fiscal decentralization is seen as a means of increasing democratic participation in the decision – making process allowing for greater transparency and accountability (Dabla – Norris, 2006, Putnam, 1993, Yilmaz, 2002).

Contrastingly, a number of scholars have argued that fiscal decentralization is harmful to economic growth. Rodden (2002) and Morgan (2007), consider fiscal decentralization harmful especially in the case of developing and transition economies. This negative perception is fuelled by the numerous challenges associated with fiscal decentralization such as increasing deficits, corruption, increased influence of interest groups and greater inter-regional inequalities which might result to lower overall economic growth ( PrudHomme, 1995). Rodden (2002) has noted that deficits have increased at alarming rates in rapidly decentralizing countries such as South Africa, Spain and Mexico. Other scholars including Treisman (2000) have reported that fiscal decentralization has resulted to increasing sub-national deficits leading to higher government expenditures and debt along with higher inflation rates.

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Due to weak accounting systems in developing countries the delivery of resources and public services is considered to be at a greater risk of corruption and opportunistic behavior at lower levels of government (Rodriquez-Pose & Ezcurra R., 2010).

As has been observed by Persson, Tortein and Guido Tabellini (1994) if the resource sharing formula is not properly thought of, fiscal decentralization may worsen the problem of regional inequalities.

Local governments face some problems with respect to inter-governmental fiscal relations. Sub-national governments are usually highly dependent on grants and transfers from the national government. As a result of this problem, sub-national governments usually have budgetary deficits (UN-HABITAT, 2011).   Oates (1999) classifies grants into conditional and unconditional grants and advocates for the unconditional grants as the vehicle for effective fiscal decentralization. Unlike conditional grants, no conditions are put on how unconditional grants are spent. Conditional (matching) grants may distort local priorities and are considered inequitable.

Other scholars that have argued against fiscal decentralization include Hommes (1996) and Tanzi (1995). Tanzi (1995) observes that fiscal decentralization may be harmful to economic growth especially in growing economies because corruption among local politicians may be worse than the corruption at the national level and as such poor public management systems at the local level might result to more wastage. He also observes that lack of sufficient information and political power may lead to a situation where by local tax payers cannot pressure local leaders to spent decentralized finance efficiently. Other arguments given by Tanzi against fiscal decentralization are that decentralization of finance might result to structural fiscal imbalances and that national bureaucracies are more likely to be of good quality compared to those at the local levels. He also notes that improvements and mobility of technology may result to a situation whereby the local services are reduced.

We cannot conclude our examination of theoretical literature without discussing the avenues through which fiscal decentralization may affect economic growth. This analysis may provide the basis for a theoretical frame work. The first question we should ask ourselves is whether we

should expect a direct linkage between devolved funds and economic growth. According to Oates (1993) infrastructural and social expenditures that respond to regional or local differences are likely to be more effective in enhancing economic development than central policies that may ignore those differences. However, Oates (1993) is not very explicit about what this implies. The question we should ask ourselves is why for example, one shilling spent on roads or education at the sub-national level should be more growth-enhancing than the same amount of money spend at the national level.

The direct effect pointed out by Oates ( 2005), indicates that sub-national governments have got an advantage in making public expenditure more efficient by better satisfying the needs and preferences of local tax payers based on the better knowledge of these preferences. Even if there is no direct linkage between fiscal decentralization and growth derived from Oates argument, there appears to be several indirect linkages between the two. Sub-national governments can be more efficient than the national governments. This implies that the same amount of funds spent at the sub-national level rather than at the national level can result in increased welfare. Oates (2005) is in support of this argument saying that local and regional governments are better at understanding the preferences and needs of their constituents and can more easily adopt their expenditure policies to fulfill them. This increase in welfare through decentralized funds has been referred by Oates as "consumer efficiency" of decentralized expenditures.

Secondly, Wolman (1997) observes that spending the funds through sub-national governments can lead to "producer efficiency". i.e the same services or infrastructure can be put in place at a lower cost. Equally important, a particular budget can yield larger quantities or better quality services and infrastructure when the funds are spend at the sub-national level. Prudhomme (1995) argues that sub-national governments can be more efficient than the central governments even if all individuals have identical preferences. The central government budget may be skewed towards national defense when the priorities of the citizens may be for instance greater expenditure on education and health.

The assertion that fiscal decentralization can result to greater producer efficiency has been supported by many scholars. Vazquez and McNab (1997) for instance argues that fiscal decentralization fosters experimentation and innovation in the provision of goods and services and sub-national governments in many countries have been privatizing public services. However, it should be noted that the widely acknowledged greater efficiency associated with fiscal decentralization is not directly accounted for in the conventional measures of output and economic growth. As such, we need to ask ourselves how greater efficiency that is not measured directly will affect measured economic growth. This question is very critical both at the theoretical level and the empirical level.

The indirect link between fiscal decentralization and growth is quite intuitive. National accounts measure public output by the level of expenditure regardless of which level of government spends the funds. If decentralized funds can produce more output or better quality output than the central government with the same level of expenditure, then there will be greater producer efficiency at the sub-national level. Eventually, the higher quantity or quality of the locally provided public services, the true output will result in increased income and therefore increase in measured growth.\

On the other hand, consumer efficiency will result to increased growth using the following channel. By better matching the preferences of citizens and increasing their individual welfare, there may be secondary benefits. For example, savings and private investments all of which would have a positive impact on measured growth. Equally important, spending public resources in a more efficient manner would mean for example a better educated and healthier labor force, less costly transportation e.t.c all of which results to greater economic growth. Vazquez and McNab (1997), notes that decentralizing resources reduces income inequalities. Further, there is considerable evidence that countries with relative low levels of income inequality tend to grow faster as has been noted by Persson and Tebellin (1994) and Deininger and Square (1996).

Another different perspective on the impact of fiscal decentralization on economic growth is that fiscal decentralization can lead to competition among the sub-national officials (e.g. county governments in the Kenyan context) leading them to actively pursue economic development

policies. Sub-national governments development policies may include: leasing public land to private developers (e.g. the case of Machakos city), granting tax privileges and offering other forms of assisting business men willing to locate in a particular sub-national jurisdiction. Inter-jurisdictional competition forces government officials to deliver services at minimum feasible cost, thus enhancing producer efficiency at the sub-national level. The lack of competition at the national government level may mean that the costs of public services are higher than they ought to be.

## 2.2 EMPIRICAL LITERATURE REVIEW

A keen perusal of literature reveals that there is a paucity of empirical information regarding the relationship between devolved funds and economic growth in Kenya. However, there is plenty of information on the association between fiscal decentralization in general and economic growth at the international scene (Amagoh and Amin, 2012).

Empirical decentralization literature has been built on the foundations of public expenditure literature. Before economists became interested with the relationship between fiscal decentralization and economic growth, they attempted to quantify the role of government expenditures on economic growth. This could be done using a disaggregated approach whereby government expenditure could be decomposed in terms of sub-national and national expenditures then in terms of sectoral expenditures. It should be noted that none of the studies on the relationship between government expenditures and economic growth has been concerned with the impact of fiscal decentralization on economic growth.

As such, the current paper will rely on the literature that explains the relationship between fiscal decentralization and economic growth so as to be able to explore the linkage between decentralized funds and economic growth in the Kenyan context.

On the following paragraphs we explore the existing empirical evidence on the potential relationship between fiscal decentralization (with a focus on decentralized funds) and economic growth.

Jing Jin and Heng-fu Zou (2002) used panel data econometric technique to explore the relationship between fiscal decentralization and economic growth. They used panel data for 30

provinces and for the period 1979 to 1999. They used three indicators to measure fiscal decentralization - the ratio of sub-national spending to national government spending, revenue decentralization and intergovernmental transfers (devolved finance). Other explanatory variables included in their model include labor force growth, openness and inflation. Using GDP growth as their dependent variable, their regression results revealed that economic growth was negatively related with the level of expenditure decentralization and positively related with revenue decentralization. That is, further revenue decentralization and expenditure decentralization promote growth. The positive relationship between revenue decentralization and economic growth supports the proponents of fiscal decentralization theories. When more revenue collection is assigned to the sub-national levels, this promotes revenue mobilization from local sources and improve overall fiscal position (Musgrave, 1958). The labor force growth rate and openness were all found to be positively related with economic growth.

Using panel data for 46 developing and developed countries covering the period 1970-1989 Davoodi and Zou (1998), found a negative association between fiscal decentralization and economic growth for developing countries but no relationship for developed countries.

Akai and Sakata (2002) explored the relationship between fiscal decentralization and economic growth in USA using time series data. They used the average annual growth rate of per capita gross product as the dependent variable and found out that fiscal decentralization was positive and statistically significant at the 1, 5, and 10% levels of significance. They measured fiscal decentralization using the ratio of sub-national revenue as a percentage of the national revenue.

Andrez Rodriquez and Anne Kroijer (2009) explored the relationship between economic growth and fiscal decentralization in central and Eastern Europe. Their fiscal decentralization variables were: sub-national expenditures as a percentage of total expenditures, tax revenues as a percentage of total national revenues and grants and transfers to sub-national governments from the national government as a percentage of total national revenues and grants. The regression results found out that fiscal decentralization is negatively correlated with growth in Central and Eastern Europe during the period of analysis. The results of the regression also established that the coefficient of the transfers from the national government to the sub-national government were negative but not significant in the year when the transfer takes place.

Higher shares of transfers from other levels of governments were found to be negatively correlated with economic growth implying that the higher the dependence on transfers from the national government, the lower the national growth rate. Sub-national taxation was positively related with the national economic growth.

Lin and Liu (2000) found out that fiscal decentralization led to significant contribution to economic growth in China. They used an econometric model with growth rate per capita GDP as the regressand and the ratio of devolved finance as a percentage of the total government spending as the variable of interest. Fiscal decentralization was found to have a positive and significant relationship with growth rate of per capita GDP. Their model suggests that fiscal decentralization should result to 3.62 per cent increase in per capita GDP.

Justin (2000) observes that fiscal decentralization provides local authorities with more resources that they can invest and thus they are able to spend more. As such, fiscal decentralization may affect economic growth by raising investments. Fiscal decentralization also influences growth by improving the efficiency of resource allocation at the local level. If it results in more investment in high productivity sectors and less investment in less productivity sectors, fiscal decentralization influences the long-term rate of economic growth.

Xie, Zou and Davoodi (1999) estimated a growth regression equation using *OLS* to demonstrate how fiscal decentralization affects the long-term growth rate of the US economy. Using state government spending share, local government spending share, average tax rate, openness, inflation rates and labor growth rates as the explanatory variables, they found out the coefficients for fiscal decentralization were positive and significant.

There is a significant negative relationship between fiscal decentralization and economic growth in developing countries and none in the developed world (Davoodi and Zou, 1998). Davoodi and Zou interpret this negative relationship to mean that the excessive recurrent expenditure by local authorizes is unlikely to lead to higher growth.

Zhang and Zou (1998) found a negative relationship between fiscal decentralization and economic growth in China. Using time series data for the period 1986 to 1992 the coefficient of fiscal decentralization which was measured by the rate of per capita provincial budgetary spending to per capita central budgetary spending was observed to be negative ( -0.054). This implies that an increase in sub-national government expenditure causes a decline in the real growth rate of the regional income.

According to Davoodi and Zou (1997), decentralization results to increased economic efficiency because local governments are better positioned than the national government to deliver public services as a result of information advantage.

Atsushi Limi (2004) using panel data on 51 countries estimated variables that relate to economic growth using *OLS*. In their model, they used the average growth rate of real GDP per capita as the dependent variable. Their explanatory variables included: the degree of fiscal decentralization which was measured by local share of expenditure to total government expenditure, the initial share of human capital which was measured by the percentage of secondary school enrolment, population growth rate and a set of dummy variables of income groups. The results of the model estimation revealed that decentralized finance has significant positive relation with economic growth.

Siti Aisyah (2009) found out that fiscal decentralization was positively related to growth but not significantly different from zero at the 5% level of significance implying that fiscal decentralization could not explain significant effect on economic growth.

Khattak, Ahmad and Khan (2010) using the log of real per capita Gross Domestic Product as the regressand and sub-national government revenue as a ratio of federal government revenue, federal transfers to the sub-national levels as a percentage of GDP, openness, tax to GDP ratio, gross capital formation as a percentage of GDP and Human Development Index as explanatory variables found out that the coefficient of the federal government transfers to the sub-national governments was found not to have a long run effect on economic growth of Pakistan.

Public finance considerations suggest that policies aimed at the provision of public services such as infrastructure and education that are sensitive to regional and local conditions are likely to be more effective in stimulating growth than the centrally determined policies that ignores these geographical differences. As such, a decentralized fiscal system play a more important role than the federal or central government in public service provision leading to rapid economic growth ( Oates , 2006).

As has been observed by Marinkov (2010), empirical literature for Africa is scant and quite limited. Yemek (2005) for instance observed that there is no relationship between intergovernmental fiscal relations and economic growth in South Africa. Using average growth of GDP per capita as the dependent variable and share of provincial expenditure in national expenditure as the variable of interest, Marinkov (2010) found a positive relationship between the two variables. They used openness, inflation rate and investment as their control variables.

Abachi and Salamatu (2012) analyzed the effects of fiscal decentralization on the growth of the Nigerian economy from 1970 to 2009.They adopted a Barro-type growth model in their study. The measures of fiscal decentralization used in the study were Sub-national own revenue as a ratio of total federal revenue, Sub-national expenditure as a ratio of total federal expenditure and Sub-national own resources as a ratio of total federal expenditure. Using Ordinary Least Squares to estimate the parameters of the model, their results showed that the variations in economic growth in Nigeria were sufficiently explained by the variables in the model. The results indicated that lower levels of government in Nigeria depended heavily on the federal government for revenue and that devolved finance was negatively related to economic growth and statistically insignificant.

## 2.2.1 OVERVIEW OF THE LITERATURE

Our in-depth analysis of empirical literature has led us to the conclusion that economic theory is inconsistent with empirical evidence with regard to the linkage between fiscal decentralization and economic growth. There are those studies that have revealed that decentralization of finance to sub-national governments leads to improved economic efficiency in local public service delivery and thus augments the growth rate at the national and regional levels (Davoodi and Zou, 1998). This has been referred to by economic theory as "Oates Decentralization Theorem". Other

studies have found no relationship at all whereas others have showed an inverse relationship between the two variables.

The mixed relationship between devolved finance and economic growth has been explained by Davoodi and Zou (1997). First, the composition of government spending may explain the negative relationship between the two variables. In most studies the fiscal decentralization measure does not disaggregate sub-national governments' expenditures in terms of recurrent and capital expenditures. It does not differentiate between recurrent and capital expenditure, neither does it distinguish between spending on welfare and social security from infrastructure spending. Economic theory postulates positive relationship between capital and infrastructure spending and a negative relationship between welfare and recurrent spending and economic growth. Davoodi and Zou (1997) further observes that excessive spending by sub-national governments on the wrong expenditure items can slow the rate of growth. However as has been noted by Amagoh and Amin (2012), most of the studies are consistent with Oates theoretical predictions that fiscal decentralization will lead to a positive impact on economic growth.

However, it should be noted that despite its usefulness in explaining the potential relationship between devolved finance and economic growth, empirical literature suffers from fundamental weaknesses such as the fact that different countries were at different stages of economic development when the studies were conducted. As such, the experience of a particular country cannot be generalized for all countries. Different countries require different policies because of the differences in the political, cultural and historical environment and as such the omission of these factors might lead to the wrong or incomplete results for analysis.

# CHAPTER THREE: METHODOLOGY

## 3.1 INTRODUCTION

This chapter presents the research design, econometric model specification and model estimation. It also explains the data collection and analysis techniques that were employed to analyze the relationship between devolved funds and economic growth in the Kenyan context.

## 3.2 RESEARCH DESIGN

Exploratory causal study design was adopted to analyze the relationship between devolved funds and economic growth in Kenya.

## 3.3 ECONOMETRIC MODEL SPECIFICATION

Since the previous studies indicate mixed results, the analytical framework of this paper is built on existing models with modifications.

We examined the empirical literature on the relationship between fiscal decentralization (with a bias towards decentralized finance) and economic growth in section 2.2. The examination of the empirical literature has showed that nearly all the scholars applied the following model. Amagoh and Amin (2012) have also observed that almost all the studies have applied the model.

$Z_j=\beta Y_j+ \alpha D_j +\mu_j$ (j=1, 2--------M)................................................................equation 1

 Where;

Z stands for economic growth, Y is a vector of other variables or control variables, D measures fiscal decentralization, $\mu$ is the error term where as $\beta$ and $\alpha$, are parameters. M represents the number of observations. The present paper has used a disaggregated approach because economic theory postulates a positive relationship between capital expenditure and economic growth and a negative relationship between recurrent expenditure and growth. In deed this is what makes the current methodology different from those of the previous scholars since most of the previous studies have lumped together both capital finance and recurrent finance.

Based on equation 1, we disaggregated decentralized finance into decentralized capital finance ($RDEF_K$) and decentralized recurrent finance ($RDEF_R$) to come up with equation 2 below.

$Z_j = \beta Y_j + \alpha_1 RDEFKj + \alpha_2 RDEFRj + \mu_j$   (j=1, 2--------M)..........................................equation 2

We then incorporate the control variables into our model to come up with equation 3 below. This equation constitutes our growth model for analysis.

**LnGDP= $\beta_0$+ $\beta_1$ Ln (TGEXP) $_t$+$\beta_2$ (OPEN) $_t$+$\beta_3$ (INFL) $_t$+$\beta_4$ (RDEF$_K$) $_t$+ $\beta_5$ (RDEF$_R$) $_t$ + $\beta_6$ (LARNAR) $_t$ + $\mu_t$................equation 3**

Where; GDP is Gross Domestic Product, TGEXP represents total government expenditure, RDEF$_K$ represents devolved capital finance as a fraction of total government spending, RDEF$_R$ represents devolved recurrent finance as a fraction of total government spending, LARNAR represents the ratio of the local Authority revenue as a percentage of the total National revenue, OPEN is the total volume of trade (sum of exports and imports divided by GDP), INFL represents the inflation rate.

Our choice of the control variables was guided by previous studies majority of which have shown that openness, total government expenditure and inflation have significant influence on economic growth.

More exports lead to efficient resource allocation as a result of external competition in the world market. Imports are the means through which technology is imported from developed countries as has been observed by Amagoh and Amin (2012). As such, we hypothesize that the coefficient of the openness variable will have a positive sign. Inflation can generate a positive effect on growth. Higher inflation leads people to invest more in physical capital and cut their real balance holdings. This is what theory calls "the Tobin Portfolio-shift effect". However, inflation may reduce the rate of economic growth by raising the transaction costs of economic activities as has been observed by Zhang and Zou (1998). We therefore hypothesize that the inflation coefficient will have a negative sign. However, our variables of interest in this model are the fiscal decentralization variables (devolved funds) .We hypothesize that the coefficient of decentralized capital finance will take a positive sign. On the other hand, it is expected that the coefficient of decentralized recurrent finance will be negative. This is because economic theory postulates a positive relationship between development expenditure and economic growth and a negative relationship between recurrent expenditure and economic growth as has been observed by Liu and Younis (2008).

## 3.4 THE HYPOTHESIS OF THE MODEL

Based on equation 3 above, the impact of devolved funds on economic growth can be tested using the following hypothesis:

Ho: $\beta_4=0$ (The impact of devolved capital finance on economic growth is statistically insignificant).
H1:$\beta_4\neq0$ (The impact of devolved capital finance on economic growth is statistically significant).
Ho: $\beta_5=0$ (The impact of devolved recurrent finance on economic growth is statistically insignificant).
H1:$\beta_5\neq0$ (The impact of devolved recurrent finance on economic growth is statistically significant).

We will reject the null hypothesis if the probability value of the coefficient of devolved funds variable is less than the significant level that we will choose and accept the null hypothesis if the probability value of the coefficient of devolved funds variable is bigger than the significant level.

## 3.5 DEFINITION AND MEASUREMENT OF VARIABLES

- GDP is the measure of economic output measured in Ksh Millions per year.

- TGEXP represents total government expenditure measured in Ksh Millions per year.

- OPEN represents openness – the total volume of trade (sum of exports and imports divided by GDP).

-  INFL represents the inflation rate.

- $RDEF_K$ represents the ratio of devolved capital finance to total government spending.

- $RDEF_R$ represents devolved recurrent finance as a fraction of total government spending.

- LARNAR represents the ratio of local authority revenue as a percentage of the total national revenue.

- $\mu$ is the stochastic error term that captures the unspecified random events that affect GDP.

It captures the influence of other variables not mentioned in the model

The coefficients $\beta_0$ represent the autonomous rate of economic growth.

$\beta_i$ (i=1, 2, 3, 4,5,6) = Coefficients of the explanatory variables to be estimated. It is a measure of the effect of the respective explanatory variable on economic growth. Each of these coefficients represents the marginal impact of the specific explanatory variable on GDP. $t$ represents the number of observations.

## 3.6 CHOICE OF THE VARIABLES

The choice of the mathematical relationship above was guided by literature review both at the theoretical level and empirical level. From an empirical point of view, the major problem faced when studying economic growth is that of model uncertainty. This is because theory does not provide enough guidance for selecting the proper empirical model. In search for a satisfactory statistical model of growth, the main area of concern has been the selection of appropriate variables to include in linear growth regressions. Quite a number of studies have found one or more variables correlated with the growth rate. Others have found one or more variables correlated with public expenditure (Maria Carkovic & Ross Levine, 2004)

According to the neoclassical and endogenous growth theories, investment is the most fundamental determinant of economic growth. However, researchers such as Liu and Younis (2008) argue that investment is highly correlated with government expenditure since public expenditure is mostly used as a proxy for public investment. As such, this study didn't include investment as an explanatory variable.

Foreign aid is likely to be correlated with government spending (Kamau, 2009). Due to this reason, this paper didn't include foreign aid in the regression.

Economic growth is affected by many factors. To be able to isolate the effect of all the factors on economic growth, ideally as many factors as possible should have been included in the model. However, data limitation hindered this from being done.

However, it should be noted that the variables included in the model are adequate enough to explain economic growth (Amagoh and Amin, 2012)

## 3.7 MODEL ESTIMATION

The model was estimated using ordinary Least Squares (OLS) estimation technique since it gives the best unbiased estimates of the parameters. OLS technique is also practically easier to apply using time series data.

## 3.8 SOURCES OF DATA AND SAMPLING TECHNIQUES

Time series data on devolved funds for the period 1993 - 2013 was sourced from the Ministries, Departments and Agencies (MDAs) that are in charge of the devolved funds. These agencies include: Constituency Development Fund Board, Rural Electrification Authority, Kenya Rural Roads Authority, Water Services Trust Fund, Youth Enterprise Development Fund Board, Women Enterprise Development Fund Board, and Poverty Eradication Commission among others.

Time series data on government expenditure was obtained from the records of recurrent and development budget estimates maintained at the National treasury and the Ministry of Devolution and planning. To be able to get a clear picture of the rates of economic growth, volume of trade statistics and inflation rates, statistical abstracts and economic surveys maintained in the Kenya National Bureau of statistics (KNBS) were perused.

## 3.9. DATA ANALYSIS PROCEDURES

Regression analysis using STATA software version 12.1 was used to determine how the explanatory variables explain the variation in economic growth.

# CHAPTER FOUR: FINDINGS, DATA ANALYSIS AND INTERPRETATION.

This chapter presents the research findings, analysis and interpretation which inform our conclusions and recommendations discussed in chapter five below.

## 4.0 UNIT ROOT TESTS

The variables tested are those specified and defined in the equations. These are lnGDP, lnTGEXP, INFL, OPEN, $RDEF_K$, $RDEF_R$, and LARNAR. The results are summarily presented in Table 3 and 4 below.

**Table 3: ADF test with intercept only**

| Variable | Order of Integration | Critical Values | | | Computed values( ) $t\square^{*}$ |
|---|---|---|---|---|---|
| | | 1% | 5% | 10% | |
| lnGDP | I(2) | -3.750 | -3.000 | -2.630 | -4.853 |
| lnTGEXP | I(1) | -3.750 | -3.000 | -2.630 | -7.006 |
| INFL | I(0) | -3.750 | -3.000 | -2.630 | -5.051 |
| OPEN | I(2) | -3.750 | -3.000 | -2.630 | -3.824 |
| RDEFK | I(1) | -3.750 | -3.000 | -2.630 | -4.966 |
| RDEFR | I(2) | -3.750 | -3.000 | -2.630 | -5.255 |
| LARNAR | I(1) | -3.750 | -3.000 | -2.630 | -6.483 |

**Table 4: ADF test with trend and intercept**

| Variable | Order of Integration | Critical Values | | | Computed values( ) $t\square^{*}$ |
|---|---|---|---|---|---|
| | | 1% | 5% | 10% | |
| lnGDP | I(2) | -4.380 | -3.600 | -3.240 | -5.387 |
| lnTGEXP | I(1) | -4.380 | -3.600 | -3.240 | -7.189 |
| INFL | I(0) | -4.380 | -3.600 | -3.240 | -4.614 |
| OPEN | I(2) | -4.380 | -3.600 | -3.240 | -9.608 |
| RDEFK | I(1) | -4.380 | -3.600 | -3.240 | -4.932 |
| RDEFR | I(2) | -4.380 | -3.600 | -3.240 | -5.147 |
| LARNAR | I(1) | -4.380 | -3.600 | -3.240 | -7.135 |

**Source: Computed by the Author**

Note: If $t^{*} \geq$ ADF Critical Values, then unit root exists.

If $t^{*} \leq$ ADF Critical Values, then unit root does not exist.

As shown in tables 3 and 4 all the variables with the exception of inflation (INFL) are non-stationary, implying that the series need be differenced to make them stationary. Inflation is of order zero, I (0) as indicated, implying that it is stationary at level. In order to avoid the tendency of having spurious regression problem in the estimated equation, we will difference lnGDP, lnTGEXP, OPEN, $RDEF_K$, $RDEF_R$ and LARNAR twice, once, twice, once, twice and once respectively. Table 4 presents a summary of ADF test with the trend and intercept further

confirms that our series are not cointergrated. The series would have been cointergrated if our variables were integrated of order 1. i.e I(1). The ADF tests indicate that there is no need of conducting cointergration analysis and as such, there is no need of using a Vector Error Correction Model (VECM) to do the estimation. As such, this paper uses the Ordinary Least Square estimation technique to estimate the parameters of the model.

## 4.1 FINDINGS

Regression of the second difference of lnGDP on the first difference of lnTGEXP, INFL, the second difference of openness, the first difference of $RDEF_K$, the second difference of $RDEF_R$ and the first difference of LARNAR yielded the following results

reg DDlnGDP DlnTGEXP INFL DDOPEN $DRDEF_K$ $DDRDEF_R$ DLARNAR

| Number of obs = 18 | | | | |
|---|---|---|---|---|
| F (6, 11) = 6.20 | Source | Ss | Df | MS |
| Prob > F = 0.0047 | | | | |
| R-squared = 0.7719 | Model | 1.95654156 | 6 | .32609026 |
| Adj R-squared = 0.6475 | Residual | .578109122 | 11 | .052555375 |
| Root MSE = .22925 | Total | 2.53465068 | 17 | .149097099 |

**Table 5: Regression Results with DDlnGDP as regressand**

| DDlnGDP | Coef. | Std. Err. | T | P>t | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| DlnTGEXP | 1.197169 | .3740018 | 3.20 | 0.008 | .3739966 | 2.020341 |
| INFL | -.0381583 | .0115576 | -3.30 | 0.007 | -.0635964 | -.0127203 |
| DDOPEN | .3272015 | .1368377 | 2.39 | 0.036 | .0260237 | .6283792 |
| DRDEF$_K$ | -.1539766 | .0637874 | -2.41 | 0.034 | -.2943718 | -.0135814 |
| DDRDEF$_R$ | -.0726957 | .1407801 | -0.52 | 0.616 | -.3825507 | .2371593 |
| DLARNAR | -.1428577 | .09193 | -1.55 | 0.148 | -.3451943 | .0594789 |
| _cons | .4774886 | .1593086 | 3.00 | 0.012 | .1268528 | .8281245 |

**Table 6: Summary of regression results**

| Variable | Coefficient | t-ratio |
|---|---|---|
| DlnTGEXP | 1.197169 | 3.20 |
| INFL | -0.0381583 | -3.30 |
| DDOPEN | 0.3272015 | 2.39 |
| DRDEF$_K$ | -0.1539766 | -2.41 |
| DDRDEF$_R$ | --0.0726957 | -0.52 |
| DLARNAR | -0.1428577 | -1.55 |
| _cons | .4774886 | 3.00 |
| Adjusted R-square | 65% | |

| | |
|---|---|
| Durbin – Watson Statistic | 1.654642 |
| F – Statistic | 6.20 |
| N ( Sample size) | 18 |

## 4.2 Test and Correction for Econometric Problems

Time series regression models are usually prone to econometric problems such as multicollinearity, heteroscedasticity and autocorrelation. The reliability of our estimates depends upon the absence of these problems of the OLS methods. We checked for these problems and the results are as follows:

## 4.2.1 Test for Multicollinearity

We tested for multicollinearity using the pair-wise coefficient of correlation to determine the degree of association among variables. High coefficient of correlation ($r_{x1}$, $r_{x2}>0.8$) shows severity of multicollinearity.  Stata gave the following results:

**Correlation Values between Variables**

| | DDlnGDP | DlnTGEXP | INFL | DDOPEN | DRDEF$_K$ | DDRDEF$_R$ | DLARNAR |
|---|---|---|---|---|---|---|---|
| DDlnGDP | 1.0000 | | | | | | |
| DlnTGEXP | 0.6610 | 1.0000 | | | | | |
| INFL | -0.0909 | 0.1919 | 1.0000 | | | | |
| DDOPEN | -0.0714 | -0.4368 | 0.0388 | 1.0000 | | | |
| DRDEF$_K$ | -0.5913 | -0.6364 | -0.2625 | 0.2233 | 1.0000 | | |
| DDRDEF$_R$ | -0.2584 | -0.3442 | -0.3037 | 0.0227 | 0.2907 | 1.0000 | |
| DLARNAR | 0.0002 | 0.0359 | -0.4885 | 0.2336 | -0.1410 | -0.0656 | 1.0000 |

The table above indicates that all of the correlation values among the independent variables are less than 0.8 implying that this model is free from severe multicollinearity. It would be difficult to avoid any collinearity among the independent variables. However, no evidence was found in the equation. Therefore we can proceed with the other tests.

## 4.2.2 Test for Heteroscedasticity

This test was conducted using the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity. The results using stata are as follows:

Ho: Constant variance

Variables: fitted values of DDlnGDP

chi2 (1)   =   1.90; Prob > chi2 =   0.1677

Note: If the Prob > chi2 < 5%, we reject the null hypothesis of homoscedasticity and accept the alternative hypothesis of heteroscedasticity.

In our case, Since Prob > chi2 =   0.1677>0.05, we cannot reject the null hypothesis of constant variance. We therefore conclude that our series are homoscedastic and as such there is no problem of heteroscedasticity.

## 4.2.3 Test for autocorrelation

This test was conducted using the Breusch-Godfrey LM test for autocorrelation. Stata gave the following results:

Breusch-Godfrey LM test for autocorrelation

---------------------------------------------------------------------------

| Lags (p) | chi2 | df | Prob > chi2 |
|----------|-------|----|-------------|
| 1 | 0.218 | 1 | 0.6404 |

---------------------------------------------------------------------------

H0: no serial correlation

Note: if Prob > chi2< 5% we reject the null hypothesis of no serial correlation and accept the alternative hypothesis of serial correlation. In our case, Prob > chi2=0.6404>0.05. We can therefore not reject the null hypothesis of no serial correlation. We therefore conclude that our series are free from autocorrelation problem.

## 4.3 ANALYSIS AND INTERPRETATION

After testing our model for multicollinearity, heteroscedasticity and autocorrelation and the subsequent ruling out of these problems, we can now be sure that our coefficient estimates are reliable and can be used for making inferences.

As can be indicated by the above estimation results, the adjusted R square is 65% implying that the variations in economic growth in Kenya are sufficiently explained by the variables in the model. The value of the F- statistic significant at 5% level of significance permits us to nullify the null hypothesis that all the estimated coefficients are not significantly different from zero.

All the variables have the appropriate signs as predicted by theory. The coefficients of both decentralized capital finance and decentralized recurrent finance have negative signs. Several factors including corruption at the lower levels of government might have resulted to the inverse relationship. The coefficient of decentralized finance takes negative signs as implied by Tanzi (1995) theoretical predictions implying that decentralized finance contributed negatively to economic growth. The coefficient of decentralized capital finance is negative but statistically significant considering its t-ratio while the coefficient of decentralized recurrent finance is negative and statistically weak given its t-ratio. This implies that the contribution of devolved funds to economic growth was insignificant during the study period.

The present study incorporates total government expenditure, trade openness and inflation as control variables. The study has found that inflation rate has negative and highly significant effect on economic growth. High inflation reduces the efficiency of investments and as such retards economic growth due to high cost of production. The coefficient of logTGEXP is positive and highly significant confirming Wagner's law. The coefficient of trade openness is positive and significant considering its strong t-ratio implying that Kenya's openness to external trade contributed positively and significantly to economic growth of the country during the study period.

## 4.4. ESTIMATED GROWTH EQUATION

**LnGDP = 0.477 + 1.197 lnTGEXP – 0.038 INFL + 0.327 OPEN - 0.154 RDEFK – 0.073 RDEFR - 0.143 LARNAR**
       **(0.16)    (0.37)         (0.01)    (0.14)      (0.06)         (0.14)        (0.09)**

$t_{critical}$ at 5% level of significance t(0.025, 11 )= 2.201

1. $\beta_0$ = 0.477.This conforms to our expectation that economic growth will be determined by other variables outside the model. It is the autonomous rate of growth. It refers to growth which does not depend on any variable in the model. t $_{calculated}$=3.0 > t $_{critical}$ and therefore we reject the null hypothesis and conclude that $\beta_0$ is statistically significant at 5% level of significance.

2. $\beta_1$ = 1.197. $\beta_1$ is positively related to growth. This means that if total government expenditure increase by 1 per cent, GDP increases by 1.197 per cent. t $_{calculated}$=3.2>t $_{critical}$ and therefore we reject the null hypothesis and conclude that $\beta_1$ is statistically significant at 5% level of significance.

3. $\beta_2$ = -0.038. $\beta_2$ is negatively related with economic growth. If inflation increases by 1 per cent, GDP decreases by 3.8 per cent. t-calculated = -3.3. /t $_{calculated}$/>t $_{critical}$ and therefore we reject the null hypothesis and conclude that $\beta_2$ is statistically significant at 5% level of significance.

4. $\beta_3$ = 0.327. $\beta_3$ is positively related with economic growth. If the degree of openness increases by 1 per cent, GDP increases by 32.7 per cent. t $_{calculated}$ = 2.39 > t$_{critical}$ and therefore we reject the null hypothesis and conclude that $\beta_3$ is statistically significant at 5% level of significance.

5. $\beta_4$ = -0.154. $\beta_4$ is negatively related with economic growth. If capital decentralized finance increases by 1 per cent, GDP decreases by 15.4 per cent. t-calculated= /2.41/ >t-critical and therefore we reject the null hypothesis and conclude that $\beta_4$ is statistically significant at 5% level of significance.

6. $\beta_5$ = -0.073. $\beta_5$ is negatively related with economic growth. If recurrent decentralized finance increases by 1 per cent, GDP decreases by 7.3 per cent. t-calculated=/0.52/ <t-

critical and therefore we do not reject the null hypothesis and conclude that $ß_5$ is statistically insignificant at 5% level of significance.

7. $ß_6$ = -0.143. $ß_6$ is negatively related with economic growth. If the ratio of sub-national revenue as a percentage of total national revenue increases by 1 per cent, GDP decreases by 14.3 per cent. t-calculated=/1.55/ <t-critical and therefore we do not reject the null hypothesis and conclude that $ß_5$ is statistically insignificant at 5% level of significance.

# CHAPTER FIVE: CONCLUSIONS, RECOMMENDATIONS AND POLICY IMPLICATIONS

## 5.0 INTRODUCTION

This chapter presents the conclusions emanating from the research findings, recommendations and policy implications of the research findings.

## 5.1 CONCLUSIONS

An examination of literature review in chapter two reveal that the literature on the link between fiscal decentralization and economic growth can be aligned into two opposing camps: those that tend to highlight the positive connections between both factors and those that dwell on the negative aspects.

Economists such as Musgrave (1958), Tiebout (1956) and Oates (1972) are all seen to be proponents of fiscal decentralization. They all argue that fiscal decentralization promotes higher efficiency, better public service, greater transparency and eventually economic growth.

Anti-growth theories i.e scholars that have argued against fiscal decentralization include Hommes (1996) and Tanzi (1995). Tanzi (1995) observes that fiscal decentralization may be harmful to economic growth especially in growing economies because corruption among local politicians may be worse than the corruption at the national level and as such poor public management systems at the local level might result to more wastage. He also observes that lack of sufficient information and political power may lead to a situation where by local tax payers cannot pressure local leaders to spent decentralized finance efficiently.

The findings of this paper are in support of the anti-growth theorists. In terms of decentralized funds, our results are in line with the findings of other empirical studies on fiscal decentralization and economic growth, such as Zhang and Zou (1998), Zhang and Zou (2001), Davoodi and Zou (1998), Rodden (2002), Thießen (2003), and Rodríguez-Pose (2004) and Abachi and Salamatu (2012).

The fiscal decentralization variables used in the model all take negative signs. Decentralized finance was used as a measure of fiscal decentralization in this paper. This variable was decomposed into capital finance and recurrent finance to be able to isolate the effects of each on

economic growth as predicted by the two opposing fiscal decentralization schools of thought. Interestingly, the estimation results reveal that both decentralized capital finance ($RDEF_K$) and decentralized recurrent finance ($RDEF_R$) contributed negatively to economic growth in the country during the period under review. The results generally reveal that decentralized finance did not contribute significantly to economic growth in Kenya during the period under review.

This might be as a result of the fact that constituencies and the defunct local authorities used to over rely on grants and fiscal transfers from the national government to finance their budgets. Oates (1999) classifies grants into conditional and unconditional grants and advocates for the unconditional grants as the vehicle for effective fiscal decentralization. Unlike conditional grants, no conditions are put on how unconditional grants are spent. He further observes that conditional (matching) grants may distort local priorities and are considered inequitable. This paper has observed that most of the Kenyan devolved funds are matching/conditional grants. The Constituency Development Fund, for example, is a conditional grant that is decentralized to the constituencies with a pre-determined formula on how the constituencies should spent the funds. As it is postulated by theory, such grants might not contribute to economic growth in a significant manner and as such it is recommended that constituencies and counties be allocated with unconditional grants.

The other measure of fiscal decentralization was the ratio of sub-national revenue as a percentage of the total national revenue. The coefficient of this variable was found to be negative and insignificant implying that taxes collected at the local authority level contributed nothing to growth during the period under review. This is true because it was observed that before and after the promulgation of the constitution of Kenya (2010), local authorities had few taxation powers and this limited their revenue base.

When more revenue collection is assigned to the sub-national levels, this promotes revenue mobilization from local sources and improve overall fiscal position (Musgrave, 1958). This study has observed that the internally generated revenues for the Kenyan local authorities and constituencies during the period under review were too low, and as such, this might have contributed to the insignificant contribution to economic growth.

Our findings are in support of the theoretical predictions of Tanzi (1995) and Prudhomme (1996). Much of the decentralization literature discusses the economic efficiency of intergovernmental competition. Tiebout (1956) for instance observes that when the national government decentralizes resources to the sub-national governments, these resources are then allocated to individuals according to their preferences. However, the assumptions that underlie this efficiency gains argument for fiscal decentralization may not really apply to a low-income and developing country like Kenya for the following reasons:

First, fiscal federalism literature assumes that allocated funds automatically reaches their intended beneficiaries. This might not be the case because of bureaucratic corruption common not only in Kenya but in many low income and developing countries. Due to corruption, allocated funds may not necessary reach their intended beneficiaries or be used for the intended purpose. Secondly, the decentralization literature often assumes that different levels of government have similar levels of technical and administrative capacity. However, the information and accounting systems in developing countries like Kenya are weak and inadequate. The quality of sub-national government staff with regard to basic tasks like accounting and record keeping might have been poor; making it difficult to ensure macroeconomic growth is promoted through skills and capacities.

Another factor which might have lead to the insignificant contribution to growth as has been explained by Tanzi (1995) is capture. Capture refers to when sub-national governments are beholden to local elites after power has been decentralized to them. Decentralization literature argues that fiscal decentralization increases local influence over the public sector. However, there is a possibility that fiscal decentralization simply transfers power from national government to the local elites and that increased access of local elites to public resources increases opportunities for corruption. With capture of the local government, there is a tendency to over-provide the service to local elites at the expense of the non-elites. The aggregate effects of capture are wastes, inefficiencies and low economic growth.

## 5.2 RECOMMENDATIONS

In the light of the above discussion, the following recommendations can be suggested which would enhance the performance of devolved funds with regard to their contribution to economic growth.

1. From the two measures of fiscal decentralization used in the study, the results indicated that local authorities and constituencies depended highly on the national government for revenue. It is highly recommended that sub-national governments in Kenya (counties) be given more taxation powers. This can be achieved through a constitutional amendment since the constitution of Kenya has left very few tax revenue opportunities to the county governments leaving them to operate under the mercy of the national government. If this is done, it will enhance their internal revenue earnings and as such boost their internal revenue base to supplement what counties receive from the national government.

2. It is highly recommended that the government should strengthen measures for fighting corruption in public offices.

3. Fiscal decentralization should be accompanied by adequate administrative and political decentralization. E.g. unconditional grants should be allocated to counties.

4. The sub-national government staff should be capacitated with regard to public finance management. It seems that fiscal decentralization has to focus on institutional capacities.

5. The government should ensure that Kenya's openness to external trade is strengthened through strategies such as export promotion.

6. The government should come up with measures of controlling the rate of inflation in the country. High inflation reduces the efficiency of investments and as such retards economic growth due to high cost of production.

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