

**FINANCIAL IMPACT OF DEVOLVED FUNDS ON ECONOMIC GROWTH IN  
KENYA**

**BY**

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## **DECLARATION**

This research paper is my original work and has not been presented for a degree in any other University or institution of higher learning and this is to the best of my knowledge.

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### **Recommendation**

This research paper has been submitted with my approval as a University Supervisor

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## **DEDICATION**

This thesis is dedicated to my dear wife and son Wise for their support, patience, for their outstanding faith in me and their encouragement which obviously then made this course possible.

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## LIST OF ABBREVIATIONS

<b>ADF</b>	Augmented Dicker Fuller
<b>CDF</b>	Constituency Development Fund
<b>DDC</b>	District Development Committee
<b>DFRD</b>	District Focus for Rural development
<b>ECM</b>	Error Correction Model
<b>ECT</b>	Error Correction Term
<b>ESP</b>	Economic Stimulus Package
<b>GDP</b>	Gross Domestic Product
<b>GOK</b>	Government of Kenya
<b>HELB</b>	Higher Education Loans Board
<b>ICT</b>	Information Communication technology
<b>KIPPRA</b>	Kenya Institute for Public Policy Research & Analysis
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>LATF</b>	Local Authority transfer Fund
<b>LM</b>	Lagrange Multiplier
<b>NTA</b>	National Tax Payers Association
<b>OLS</b>	Ordinary Least Squares
<b>PP</b>	Phillips-Perron
<b>USA</b>	United States of America

## DEFINITION OF KEY TERMS

<b>Decentralization</b>	This represents the transfer of resources from higher to lower levels of government usually accompanied by an enhancement in responsibility and functions.
<b>Devolution</b>	This is a system that combines self-governance at local level and shared governance at national level where none of the levels of government is a mere agent of the other but each is created and protected by the constitution.
<b>Economic growth</b>	An increase in the capacity of an economy to produce goods and services, compared from one period of time to another.
<b>Financial impact</b>	This refers to the bearing of certain action measured in financial terms.
<b>Governance</b>	The act, process, or power of governing; government by regaining a sense of the state is thus an absolute priority, not only for an effective policy

## ABSTRACT

The Kenya Government has tried to facilitate decentralization through initiatives like LATF, DFRD, CDF and ESP. The biggest challenge remains in the constitutional framework in tackling those inherent problems stemming from weak institutional capacity, poor legal framework, and lack of community involvement and multiplicity of ghost projects continuously undermine the essence of various efforts. The end result is that the strategies take a short term nature, making it hard for them to resist periodical economic shocks.

This study aims at assessing the impact of the devolved system of governance on economic growth in Kenya. This research relied heavily on annual secondary data from 1981 to 2012 which was obtained from the Government Printers, Kenya National Bureau of Statistics, The Kenya National Library, The G.o.K Economic Surveys, The World Bank website and the G.o.K Public Expenditure review reports. This tests the competing performance of various decentralization strategies by the Government as to their impact on the economic growth. Analysis was performed using regression techniques. Results for devolved funds indicated that in the long run DFRD, CDF, LATF and ESP were found to be insignificantly related to GDP. The parsimonious long run model also found that total devolved funds allocations and the dummy for ESP was insignificantly related to long-run GDP. Short run DFRD allocations were significantly related to short run GDP. Therefore, increases in short run DFRD allocations lead to an increase in short run GDP. On the other hand, the short run CDF allocations, short-run LATF allocations and ESP was not significantly related to short run GDP. The parsimonious short run model also found that total devolved funds allocations were significantly related to short run-run GDP. This implied that an increase in total devolved funds in the short run led to an increase in short run GDP. It is recommended that the government should increase the total amount of devolved funds as this stimulates growth in the short run. Specifically, more funds should be allocated to the current devolved Government structures as opposed to the traditional DFRD as opposed to LATF, CDF and ESP.

## CHAPTER ONE: INTRODUCTION

### 1.0 Background of the Study

Devolution is the statutory granting of powers from the Central Government of a sovereign state to Government at a sub-national level, such as a regional, local, or state level. Devolution can be mainly financial or administrative.<sup>1</sup>At independence in 1963 the Government of Kenya (G.o.K) inherited a nation characterised by disparities in income and economic development as measured by economic standard indicators such as literacy level, infant and maternal mortality and life expectance, these disparities were found to exist by gender and region (Thulow, Kiringai and Gautum,2006).

To address these disparities the Government developed the sessional paper No.10 of 1965 on African Socialism and its application to planning in Kenya which outlined issues relating to poverty and income inequality. The Government undertook to ensure freedom from want, disease and exploitation, thus the key concerns of the paper was to help the less developed parts of the country, GoK (1965) the Government affirmed that planning was to be extended to the provinces, districts and municipalities so as to ensure that there was progress in each administrative unit. This was the boldest move towards decentralisation in Kenya.

Further efforts by the Government to realize equitable regional growth led to development of various economic concepts. They include The District Focus for Rural Development (DFRD) in 1983 Local Authority Transfer Fund (LATF) in 1999 Constituency Development Fund (CDF) in 2003 and Economic Stimulus Package (ESP) in 2009.The DFRD strategy was designed to provide mechanism for integrating district priorities, and ensure that resources

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<sup>1</sup>This paper will lay emphasis on financial devolution and how the same has over time impacted on the country's GDP as well as trends in the economic growth rate.

were shared more equitably with more resources being channelled to regions with most needs. As a reform measure to put DFRD strategy under policy, Sessional paper No.1 of 1986 on economic management for renewed economic growth, was developed in which the DFRD aimed at reducing income inequality and rural urban differentials according to GoK (1986).

This strategy (DFRD) came at a time when the country's economic growth rate had fallen from the high of 22% in 1972 to the lower of 1.3% in 1983. The Government then injected K£.2, 007,900 to the economy through districts. This figure grew to K£. 6,900,000 annually by 1987. At this time there was a significant recovery to the growth rate to 7.1 % in 1986 and 5.9 % in 1987. The gains however reversed as a result of hash political environment in early 1990s with the economic growth falling again to the lowest -0.79 in 1992 and eventually maintaining a lowest average of 1.8 % to the year 1999.

The Local Authority Transfer Fund (LATF) was introduced in 1999 with the aim of improving local service delivery, improving financial management in Local Authorities and reducing their outstanding debts as provided for by the Local Government Act cap 265, LATF Act No 8 of 1998 and local Government Loans Act Cap 270. It was also intended to compensate Local Authorities for any shortfall in local revenues as a result of loss of local authority's service charge which was abolished in January 2000. LATF was distributed in 175 local authorities, Nairobi city council, 4 municipal councils, 62 town councils and 67 county councils. At its inception Kenya's GDP rate was 0.5 %. There was an immediate recovery to 3.7 % in the year 2001 mainly as a result of improved wage bills in various Municipal and county councils. However the fund was not able to realize much gain since it was mainly urban centred. By 2002 the economic growth rate had fallen to back to 0.5% (G.o.K, 2010).

The Constituency Development Fund (CDF) was introduced in Kenya in 2003 with the aim of fighting poverty at the grassroots level and control imbalances in regional development (TISA, 2009). At its inception in 2003, the fund was allocated 2.5% of the Government's ordinary revenue, which was later increased to 7.5% in 2010, 75% of the fund was allocated equally amongst all 210 constituencies with the remaining 25% being allocated according to the constituency poverty levels (KIPPRA, 2010). The CDF departure from the structure of LATF which was mainly urban centred to cover the entire country was its main strength. Successful implementation saw the country's GDP improve from 0.5 in 2002 to 2.9 in 2003 and continued with a rising trend to 7.1 in 2007. (GoK, 2010)

The Kenya Economic Stimulus Program (ESP) was initiated by the Government of Kenya in 2009 to boost economic growth and lead the economy out of the recession brought about by economic slowdown. It was intended to jumpstart the economy towards long term growth and development, after the 2007/2008 post-election violence that affected the Kenyan economy, prolonged drought, inflationary pressure brought by increase in crude oil price, rising food prices and the effects of the 2008/09 global economic crisis. The stimulus was made necessary by the decline in the economic growth rate from 7.1% in 2007 to 1.7% in 2009 (World Bank, 2009). By 2011 the growth rate had shown a remarkable improvement and stood at 4.4% which was a positive indicator of the performance of ESP.

## **1.2 Statement of the Problem**

To overcome the distortion in the allocation of public expenditure a number of decentralization programs were put into place by the Government. Among such programs was the DFRD in 1983. The fund realized its objective in the initial stage seeing the economic growth rate rise from its lowest of 1.3 % in 1983 to a high of 7.2 in 1987 but slumped significantly to -0.8 in 1992 (Barkan & Chege, 1989). In 1999 the Local Authority



transfer fund was launched. During its first five years of operation the economy showed mixed reaction with slump to 0.5% in 2002. The CDF was established in 2003 and by 2007 the economic rate had risen to 7.1%. The 2008 post-election violence was a major contributor of reversed growth pulling the growth rate back to 1.5%. This led to the introduction of the Economic Stimulus package in 2009 and by 2011 the economic growth rate had risen to 4.4 % (G.O.K, 2012). Observing the movement of the growth rate from 1980, shows rising trends in the early years of introduction of a given strategy and a slump after a few years of operation, pointing out a clear fact that various decentralisation strategies did not have capacity to endure periodical economic shocks hence their inability to stimulate economic growth. Korten (1980) attributes these to inherent problems stemming from weak institutional capacity, poor legal framework, and lack of community involvement. This study will determine the financial impact of devolved system of governance as provided in the Constitution of Kenya 2010 to economic growth in Kenya.

### **1.3. Objectives of the Study**

#### **1.3.1 General objective**

The main objective of this study was to find out the financial impact of the devolved system of governance on economic growth in Kenya.

#### **1.3.2 Specific objectives:**

- i. To determine how DFRD affects economic growth in Kenya.
- ii. To find out whether LATF affects economic growth in Kenya
- iii. To determine how CDF impacts on economic growth in Kenya.
- iv. To determine how ESP impacts on economic growth in Kenya

#### **1.4 Research Hypotheses**

- i. There is no significant relationship between DFRD and economic growth in Kenya.
- ii. There is no significant relationship between LATF and economic growth in Kenya.
- iii. There is no significant relationship between of CDF and economic growth in Kenya.
- iv. There is no significant relationship between ESP and economic growth in Kenya.

#### **1.5 Significance of the Study**

This study evaluated various aspects of devolved funds that Kenya has had in the past and how their performance have impacted on the economic growth of the country. The gaps found during the study will provide a platform for the country in developing the necessary policy framework so as to help the leaders in both central and county governments pursue the policies that will improve the investment climate in the counties to facilitate massive investment sufficient enough to create enough jobs and reduce the poverty index which will translate to economic growth. The information compiled in this study will help academicians and researchers to carry out a further in-depth investigation on the degree to which the devolved system of governance would affect the overall performance of specific counties. This study will help to show a solid understanding of the legal framework and the recommendations on the appropriate regulations that will be necessary for ease of transition and improved performance of both county and central government depending on the elected and nominated leaders.

## **1.6 Limitations of the Study**

While conducting this study, the researcher relied heavily on secondary data available at the National Bureau of Statistics, Ministry of Devolution, Planning and Vision 2030, National treasury, KIPPRA Library, and National Archives which was not easy to access as it required licensing from the government. The fact that this data will be in form of time series opens up the critical challenge of autocorrelation which comes as a result of disturbances occurring at one period of time carrying over into another period hence violating the basic assumption of time series. Testing for autocorrelation will be necessary and the cause identified in order to find appropriate remedy for the same (Mukras, 1993).

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter discusses various theoretical arguments advanced by philosophers to explain economic growth. It also discusses the conceptual framework, and how the variables discussed influence economic growth in the devolved government.

### **2.2 Devolution**

Devolution is a multi-dimensional approach that organizes governance and manages state power along multiple lines. It defines, distributes and constrains the use of state power along multiple lines by combining both vertical and horizontal dimensions. In essence, devolution forms the foundation for federal systems and structures of government and is founded upon the concept of decentralization and devolution of power. It may similarly be seen as a system of governance that devolves power from the centre to smaller sub government units at the local level in order to ensure that all citizens equally enjoy the national cake. It can actually be described as the statutory granting of powers from the central government of a state to government at a sub-national level, such as a regional, local or county level.

In theory devolution means greater program and policy flexibility, responsibility and self-sufficiency for local governments. It also means fewer federal dollars flowing directly to city governments and greater oversight of local programs by states and state agencies. Cole, Hisson and Arvidson (1999). Equitable economic development is the long term goal of any government in achieving a sustainable GDP a better form of devolution is one that can be sustained in the long run, it should not be seen as an issue that periodically appears, catches fire for a short time then burn itself out (Cole et al, 1999).

The concept of decentralization, presupposes a process or a system of administration in which political, financial and decision-making powers are transferred from the centre to the lower

administrative units like local governments. Under this arrangement, the Local Governments are given more powers and authority to manage their own affairs within a framework of unitary state (Nsibambi, 1998).

The autonomy and amount of powers, resources and functions that are devolved to local governments to manage their own affairs are determinants of the nature/form of decentralization. The forms of decentralization include devolution, de-concentration, delegation and privatization. The first three forms describe a process whereby the Central Government shifts responsibility to a greater or lesser degree to lower units or local Governments. Privatization is the private sector involvement in service provision, giving the responsibility over services previously performed by the public to the private sector according to (Nsibambi, 1998).

Local Governments are that part of a Government which is most accessible to the average citizen that closely touches him and presents the most opportunities for the public service. Regional devolution is a complex and heterogeneous process. From the high level of decentralization of certain federal states, such as Germany, and of some Spanish regions, to the more limited influence of regions in France and Mexico, decentralization processes across the world have adopted a wide variety of forms. Consequently, conceptualizing devolution is far from simple. Donahue (1997) characterizes the process as being made up of three separate factors: legitimacy, the decentralization of resources and the decentralization of authority. Any form of devolution implies some degree of sub-national legitimacy and some form of decentralization of authority and resources; consequently, any analysis of devolution should take these three factors into consideration.

The advent of the devolved system of governance Kenya is expected to lead to the practice of a more balanced system of fiscal federalism, more transparency, fiscal accountability and

more devolution of power to lower units of government and hence more fiscal decentralization. While a greater degree of decentralization would, no doubt, contribute to greater grassroots participation, generate more local development, increase efficiency and equity, create employment opportunity and promote poverty alleviation, it must not be done in such a way as to conflict with the national objective or unduly complicate it, according to Omolo (2010).

### **2.3 Theoretical review**

There are a number of theories that have been advanced. First is the accountability theory which suggests that decentralization is also argued to promote accountability and reduce corruption in the government (Ostrom, Schroeder & Wynne 1993). Since sub-national Governments are closer to the people, citizens are considered to be more aware of sub-National Governments' actions than they are of actions of the Central Government. Also, the resulting competition between sub-national providers of public goods is seen to impose discipline on Sub-National Governments, as citizens averse to corruption may exit to alternative jurisdiction or providers. Corruption represents a breakdown of cooperative behaviour, in which the few collude to the detriment of all. Devolving functions to smaller units that are closer to the population should, in theory, increase consensus and legitimacy concerning the choice of public services. This, in turn, can be expected to foster cooperation, vigilance, as well as acceptance of and adherence to rules of public sector integrity. This would be especially true where the financing of public services is devolved via the assignment of tax instruments or the collection of user fees. In plural or socially fractionalized nations, the question then arises whether jurisdictions can be so designed so as to maximize social (e.g. ethno-linguistic) homogeneity and social capital, and therefore the propensity to cooperate at the local level (Meagher 1999).

The second theory is the cost recovery theory which emphasizes that making service more demand responsive through decentralization has added benefit that increases households' willingness to pay for services (Briscoe & Garn 1995). Households are argued to be more willing to pay for and maintain services that match their demand. This is the flip side of the allocative efficiency coin. Moreover, a relatively close match between supply and local demand, if coupled with transparency and with local cost-sharing or cost recovery, can provide the incentives and information base for effective local monitoring. The latter is a necessary ingredient in an overall anti-corruption strategy, and in particular helps to shrink the information asymmetries and leakages that can undercut both allocative efficiency and cost recovery (Litvack & Seddon 1999).

On the other hand the allocative efficiency theory argues that the most common theoretical argument for decentralization is that it improves the efficiency of resource allocation. Decentralized levels of government have their reason in the provision of goods and services whose consumption is limited to their own jurisdictions. By tailoring outputs of such goods and services to the particular preferences and circumstances of their constituencies, decentralized provision increases economic welfare above that which results from the more uniform levels of such services that are likely under national provision. The basic point here is simply that the efficient level of output of a local public good (i.e. that for which the sum of residents' marginal benefits equals marginal cost) is likely to vary across jurisdictions as a result of both differences in preferences and cost differentials (Oates, 1999).

Since Sub-National Governments are closer to the people than the Central Government, they are considered to have better information about the preferences of local populations than the Central Government (Hayek 1945, Musgrave, 1998). Hence, such governments are argued to be better informed to respond to the variations in demands for goods and services. Second, sub-

national governments are also considered to be most responsive to the variations in demands for and cost of providing public goods. Decentralization is thought to increase the likelihood that Governments respond to the demand of the local population by promoting competition among Sub-National Governments (Tiebout, 1956).

Competition among Sub-National Governments is said to allow for a variety of bundles of local public goods to be produced, and individuals are said to reveal their preferences for those goods by moving to those jurisdictions that satisfy their tastes that is, by “voting with their feet.” This is seen to pressure Sub-National Governments to pay attention to the preferences of their constituents and tailor the service delivery accordingly, whilst risking the loss of tax revenues Breton (1996). This “voting with feet” is thus argued to enhance the efficiency of resource allocation by increasing the likelihood that Governments satisfy the wishes of citizens. Where geographic mobility is constrained, as in many developing and transition countries, alternative service providers such as private firms and NGOs are potentially important in providing exit options. (Qian & Weingast, 1997).

## **2.4 Empirical literature review**

The assignment of the stabilization function also follows from the chaos that would ensue if Sub-Central Governments are assigned the responsibility. Sub-national policies will lead to sub-optimal policies from the point of view of national welfare. Moreover, given the openness that characterizes the relationship between the Regional Governments, they are grossly constrained in carrying out effective stabilization policies. This is because these lower tiers of Government have very limited capacity to influence local employment levels and inflation (Bonfirm & Shah, 2007).

Ahmad and Mottu (2005) examine how different types of accountability mechanisms between Central and Local Government affect the incentives facing service providers and its



impact on service delivery outcomes. The issues include fiscal, financing, regulatory and administrative dimensions and its effect on service delivery. They found that, sound design is important, it should be noted that the implementation may illicit new challenges that may require revisiting the designing issue.

In some countries in sub-Saharan Africa, decentralization and service delivery have taken place by default. For example, in some Local Governments in Nigeria, officials are never responsive to its constituents but the attempt by the latter to ensure service delivery “forces” the elected officials to attempt in designing the administrative aspect of service delivery.

Rodrigues and Gill (2002) argue against devolution concludes in their study on the global trends towards devolution that given the understated heterogeneity of devolutionary processes, the parallel heterogeneity of devolutionary implications was addressed. The expectation that devolution leads to greater efficiency, as the devolutionists and many policymakers appear to hold, can be called into question on the grounds that the process tends to engender both debt and territorial competition which are harmful to national efficiency.

The gains from devolution through the matching of public services to a heterogeneous population preference structure are a static argument that may overlook dynamic alterations in the behaviour of the actors involved. From either perspective, the incentive structure facing the national and Sub National Governments alters and presents the potential for opportunistic interaction that is damaging for the economy as a whole. Although the matching argument remains strong it should be weighed against the expected losses resulting from these factors before any devolutionary processes are undertaken (Rodrigues & Gill, 2002).

In terms of equity, evidence was present to support the case that decentralisation of resources is often regressive from a territorial point of view. The combination of dwindling Central Government outlays in relative terms with the greater bargaining power of the richer and/or

larger Sub National Authorities frequently leaves weaker and poorer regions in a worse financial state than under a centralised system eventually slowing down the National economic growth.

Pasha, Pasha and Khan (2001) in their paper on devolution and fiscal decentralization in Pakistan conclude that the devolution plan involves substantial fiscal decentralization to local Governments, and this is unprecedented in the history of Pakistan. Almost Rs 90 billion which is 3% of GDP is transferred from provincial to local budget. This will make them transform from provincial Government's role of direct provision to that of financing, regulation and monitoring the emergency of Local Government as prime delivery agents of services and key player in the process of regional development. The overall effect will be a more cost-effective and sustainable government which will translate to economic development.

Yilmaz (2009) in a study on fiscal decentralization and macroeconomic performance argues that the correlation coefficient between local governments spending and GDP partly supports decentralization theorem. In the developed countries, where Local Governments are more responsive to constituents, there is a high positive correlation between GDP per capita and Local Government spending. On the other hand, in developing countries, the correlation coefficient is very low or even negative.

According to Wantchekon and Asadurian (2002), decentralisation in practice appears to have a mixed track record, and countries such as Brazil, Argentina, and Nigeria are cases in point. For example, they argue that decentralization can increase interregional disparities because national policies designed to correct disparities will be limited, or decentralisation might lead to the under provision of fiscally induced stabilization policies. In the empirical literature on the relationship between Government decentralization and Government size, whether and

how fiscal decentralisation affects Government size mainly relies on comparisons of aggregate levels of overall Government spending without any knowledge about the distribution of the power to tax between the different levels of government (Kirchgasser & Schaltegger, 2003).

Schou and Haug (2005) conclude that decentralisation can fulfil conflict-mitigating role only if it meets certain conditions. First, it must broaden popular participation, including minority groups. Second, it must incorporate an efficient bargaining process between all the sub-national groups and the Government. Third, decentralization framework must establish mechanisms for State outreach and control in remote areas. Fourth, the framework must build trust between groups that participate in local governance institutions. Fifth, the intergovernmental fiscal relations framework must facilitate redistribution of resources between regions.

The absence of reliable public accountability mechanisms could jeopardize the successful implementation of decentralisation. To ensure both the accountability of elected representatives to citizens and the accountability of bureaucrats to elected representatives, public accountability mechanisms are a prerequisite. A transparent and competitive political process, as well as relevant and credible information, is critical to accountability. This will help to check waste of public funds that characterize the current local government system. In Kenya, Sub-National Government jurisdiction is closely aligned to ethnic groupings. Whereas this enhances cooperation and collective action within the sub-national units, it certainly limits inter-jurisdictional competition. Where tribal affiliation influences appointments of bureaucrats who serve in the county governments, the end result will be incompetent and probably corrupt administration. Schou and Haug (2005) note that, the major concerns over decentralization in ethnically diverse societies are that it encourages

ethnic identification, accentuates inter-group differences and fosters discrimination against local minorities – all increasing the likelihood of ethnic conflict. Regional parties may also emerge and precipitate ethnic conflict and the drive to secession by mobilizing constituencies on ethnic or geographic grounds. Regional parties may also produce legislation that threatens or isolate other groups in a country (Brancati, 2005). These factors have been consistent in affecting the stability of any form of decentralisation. With this in mind it is of interest to every Kenyan to see the financial impact of devolved system of governance to the economic growth in Kenya.

## **2.5 Constitutional framework on devolution in Kenya.**

One of the objects and principles of a devolved government in accordance to the Constitution of Kenya 2010 in Article 174 is to recognize the right of communities to manage their own affairs and further their development. The entire spirit of devolution therefore according to Article 174 is to fragment the country into 47 economic units' referred to us counties. Where the ability to govern and manage locally and coordinate inter locally will become more important. In turn three issues are likely to become more prominent: economic development, user charges and privatization. This will further translate to reinvention, innovation, privatization, competition, strategic planning and productivity improvement all of which will favour economic development (Cole et al, 1999)

It is clear that the devolved system therefore not only brings Government and resources closer to the people, but also gives powers and responsibilities to the people and leaders at the county level in decision making and determining the direction they want to go in development and politics. In turn the public administrators and political leaders will be forced to shift their efforts towards such technical issues as economy, efficiency and effective use of tax monies as well as toward practical matters of economic development and regional

cooperation and of which are attributes of a growing economy according to Cole et al. (1999).

Countries that are turning to decentralization are doing so with the hope that it is the only sure way of getting rid of the traps of ineffective and inefficient governance and in adequate economic growth. Economists and policy makers are of the view that proper form of decentralization is an effective strategy to promote economic growth and development (Malik, Hassan & Hussain,2006).Decentralization can be used to refer to either a territorial or area-based phenomena (such as the CDF and LATF) or functional phenomena (such as HELB, the HIV/AIDS Fund and the Bursary Fund).One involves the transfer of responsibility and authority for public functions to organizations with well-defined sub-national, spatial or political boundaries such as a province, a religion, municipality or county (Gituto,2007).

The other involves transfer of authority to perform specific tasks to specialized organizations that operate nationally or regionally. It is important to note that regions are not out there waiting to be discovered. They are socially constructed, both discursively and materially, in relation to specific criteria, although political actors and particular interest groups may seek to define and defend them in essentialist terms, it is important to understand why this is so, not least in relation to arguments about regional devolution (Hudson,2006).

Although there is no clear indication of just to what extent shall the new constitution add fuel to the economic trends it is certain that there shall be some critical benefits that shall accrue to the nation. This is so since Devolved Governments are unanimously associated with implied greater efficiencies, increased local civic engagement and participation in state processes, greater accountability to grassroots and other stakeholders and communities, a reduced bureaucracy and red tape especially for local development projects, and increased flexibility on the initiation and implementation of development interventions (Gituto, 2007).

It can also be valuable in the mobilization of extra-budgetary resources and improving the links between market forces and local economies.

Hudson (2006) outlines a number of possible benefits of devolution as to include the following: first, he says devolution will bring about benefits in terms of new forms of participative democracy, greater political accountability and transparency in policy making process within the region. Second, existing forms of top down regional economic policy through which Central Government acted at a distance on the region, had manifestly failed and been rendered obsolete by the neoliberal globalizing economy.

Thirdly, an elected assembly would strengthen the position of the regions in competition for inward investment and associated new employment. Regions in the late modern world of the European Union and the USA have been successful in making the transition to the high road of economic development. Regional success stories such as Baden-wurttemberg, the Third Italy, and Silicon Valley are characterized by devolved forms of governance and regulation and this is seen as causally related to their economic success. The effectiveness of physical decentralization depends upon appropriate expenditure assignment with divisions of functions among different levels of government depending upon their comparative advantage, appropriate tax or revenue assignment, the efficient design of a system or transfer and its proper implementation (Kadar,2006).

### **2.5.1 Historical development of financial devolution in Kenya.**

After independence in 1964, Kenya pursued economic development through central planning. The centralization of authority and management of resources led to the inadequate distribution of resources across regions, resulting in a growing inequality in services, infrastructure and development across the country (Court & Kinyanjui, 1980). To overcome the distortion in the allocation of public expenditure a number of decentralization programs were put into place during the 1960s and 1970s, but without much success as these programs became politicised and the misallocation of resources persisted (Court & Kinyanjui, 1980). Over the last 30 years Kenya has had a renewed interest in decentralization programs as a way to reverse inequality and tackle poverty. (Mapesa & Kibua, 2006).

#### **2.5.1.1 District Focus for Rural Development**

The DFRD was first announced in 1982 but was fully operationalized in 1983 and put in policy by the sessional paper No.1 of 1986. (GoK, 1986). The strategy was designed to provide mechanism for integrating district priorities. In particular Rural Development Fund was created to ensure that resources were shared more equitably with more resources being channelled to regions with most needs. Sessional paper no 1 of 1986 on Economic management for Renewed Economic growth, was developed as a reform measure and the DFRD aimed at reducing income inequality and rural urban differentials. Kenya was not the first African country to argue for decentralization, nor was it the first state in sub-Saharan Africa to pursue such reform. Tanzania had expressed a similar view for Tanzania in 1972 when it launched what proved to be an abortive effort to decentralize development planning to the village level. (Barkan & Chege, 1989). This strategy (DFRD) came at a time when the country's economic growth rate had fallen from the high of 22% in 1972 to the lowest of 1.3% in 1983, according to the world bank data. The Government then injected in the

economy a total of K£.2,007,900 through districts and this figure grew annually to K£. 6,900,000 by 1987. At this time there was a significant recovery to the growth rate to 7.1 % in 1986 and 5.9 % in 1987.

**Table 1.1: Economic growth rate since 1980 to 1988.**

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988
Growth rate	5.6	3.8	1.5	1.3	1.8	4.3	7.2	6.2	4.6

**Source: World Bank data**

The gains however reversed as a result of hash political environment in early 1990s with the economic growth falling again to the lowest -0.79 in 1992. The efforts of decentralisation seemed positive but the fact that the strategy could not result in more sustainable economic growth was its undoing. According to Barkan and Chege (1989), the reasons include lack of sufficient information about the specific needs and conditions present in the thousands of local communities which comprise rural society, lack of necessary capacity in terms of financial resources or personnel to plan and implement appropriate development policies at the local level, the prospects for rural development are highest where local people participate in determining the course of development initiatives, and where they believe they have a stake in their outcomes.

Few African states have created an appropriate local institutional infrastructure to facilitate citizen participation in development planning, indeed most have undermined such institutions where they exist. Hence the conclusion that governments must decentralise the making of policy in respect to rural development, and must in turn establish or revitalize institutions at the grassroots to support this process from the 'bottom-up' ( Barkan & Chege,1989).

The underlying assumption of this argument is that rural development proceeds most rapidly where there exists a process of consultation and bargaining between the state and rural



populations via which the macro-policy objectives of the state and the self-defined needs of rural residents (who are mostly peasant farmers) are adjusted to each other. In terms of institutions, those of the Central Government must be complemented by those at the grassroots. Financial decentralization therefore on its own without the call for political power may not help any country to realize its objective. The proposed development projects never went beyond grass root levels and the impact on the budget was at best ambiguous thus the entire initiative never achieved the intended objective of devolution and decentralization in 1990s the impact of continued spending on DFRD did not seem to influence the upward movements of the growth rate.

#### **2.5.1.2 The Local Authority Transfer Fund (LATF).**

In 1999 the government introduced the LATF objectively to improve local service delivery, improve financial management in Local Authorities and reduce their outstanding debts as provided for by the local government Act cap 265, LATF Act No 8 of 1998 and local Government Loans Act Cap 270. This fund was also intended to compensate local authorities for any shortfall in local revenues as a result of loss of Local Authorities Service Charge which was abolished in January 2000 (GoK, 2010).

LATF was distributed in 175 local authorities, Nairobi city council, 4 municipal councils, 62 town councils and 67 county councils. This was happening at a time when there were various economic shocks caused by the Goldenberg scandal and political violence and clashes in 1992 and 1997, the impact of all these was Government withdrawal of various subsidies especially in education and agricultural sector. This led to millions of idle, poor, jobless, and angry youths, many of whom have seen their loved ones killed by the police or ethnic rogues and over 350,000 people who remain internally displaced from violence following Kenya's elections in the 1990s (Klopp & Kamungi, 2008).

Once a refuge of security in eastern Africa and the Great Lakes region, Kenya now had a burgeoning humanitarian crisis on its hands. Worse, it was nearly impossible to adequately address the problems of this mass population of traumatized, displaced people. These poor and newly displaced are a ready reservoir for recruitment into organized underground groups that may continue to undermine economic growth (KloppandKamungi2008).

The Bretton Woods also withdrew donor funds citing problems with governance and increased corruption. The economic growth rate therefore fell to 0.5% in 1999 but maintained an average of 1.8% in the period of ten years between 1990 and 1999. This was the lowest ever since independence as compared to 1970s and 1980s whose average growth rate was 7.2% and 4.2%, respectively (GoK, 2010).

Despite its popularity, LATF did not have explicit poverty reduction objective which again meant it could not necessarily translate in the wellbeing if the citizens thus could not directly impact on the income levels of the communities. The fund also suffered significantly as a result of weak monitoring of financial performance and project outcomes. The weaknesses led to a number of LATF financed projects failure to deliver good outcomes (GoK, 2010)

The National Tax payers Association conducted a survey in 2008 and found out that there were numerous ghost projects to which funds were allocated but the projects did not exist physically. The Nairobi City Council for instance had spent money on construction of toilets in Dagoretti Market and furnishing of Anderson Hall but there was no evidence of such projects. Essentially the LATF became a political spending fund other than improving the welfare of citizens hence its failure (NTA, 2008).

### 2.5.1.3 The Constituency Development Fund (CDF)

The Constituency Development Fund (CDF) was created in Kenya in 2003 through an Act of parliament. Its aim was to fight poverty at the grassroots level through the implementation of community based projects which have long term effects of improving the peoples' economic well-being and to relieve members of parliament from the heavy demands of fund-raising for projects which ought to be financed through the Consolidated Fund. As Kenya stepped up her interest in decentralization programs as a way to reverse inequality and tackle poverty it also tried to prevent the failure of previous decentralization efforts the empowering the grassroots through devolved decision making, participatory budgeting and the monitoring of these programs. This is what informed the operation of CDF (Mapesa & Kibua, 2008).

The legal provision of the establishment and operation of the CDF Act suggests that the fund is essentially a model for decentralization of development planning and implementation. According to the Public Expenditure Review Policy for prosperity 2010, the organization and operation of the fund lies squarely within the domain of administrative decentralization. At a time of its inception the county's economic growth rate had fallen significantly to a paltry 0.5% in 2002. The positive economic outlook following successful political transition and the drastic change in the government policy as well as introduction of the CDF fund in 2003 led to a significant recovery of the GDP growth rate 0.5%. Table 2 shows the growth rate of GDP and the amount injected into the CDF fund over the period 2003 to 2011.

**Table 1.2 Annual CDF allocation and corresponding Economic growth rate since 2002**

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Amount of CDF in kshs (000)	00	1260	5431	7028	9736	9796	9797	11950	13855	16987
Growth rate.	0.5	2.9	5.1	5.9	6.3	7.1	1.5	2.7	5.8	4.4

*Source: World Bank*

The survey by the household budget and expenditure in 2010 found out that there is a weak correlation between per capita spending and poverty indices at the constituency level an indication that the CDF allocation was unlikely to eradicate poverty and address regional inequalities (GoK 2010). The 2010 economic survey therefore makes the following recommendation to the CDF: There is need for more comprehensive view of spending at the local level including how Central Government expenditures are spend by location, per capita and not aggregate allocations of decentralised funds. CDF must take into account the differences in the regions and population groups and to enhance accountability there must be efficient monitoring and evaluation for decentralized funds as part of the national framework. There should be clear guidelines for identifying and implementing a CDF project, enforce CDF reporting requirements strictly among others.( GoK,2010)

#### **2.5.1.4 Economic Stimulus package (ESP)**

Despite the gains on the economy since 2003, 2007/8 post-election violence retarded growth rate of Klopp and Kamungi (2008) argue that the low investor confidence after the post-election violence meant that the government was to look out for local investment particularly in the area of food production. As a result of this, Economic Stimulus Program (ESP) was initiated by the Government of Kenya to boost economic growth and drive the economy out of a recession which was brought about by economic slowdown. It also aimed to jumpstart the economy towards long term growth and development, after the 2007/2008 post-election violence that affected the economy, prolonged drought, a rally in oil and food prices and the effects of the 2008/09 global economic crisis. The stimulus was made necessary by the decline in the economic growth rate from 7.0% in 2007 to 1.5% in 2008. The total budget allocated amounted to Kenya Shillings 22 Billion (260 million US\$), with the money going

towards the construction of schools, horticultural markets, Juakali sheds and public health centres in all the 210 constituencies. (World Bank, 2009)

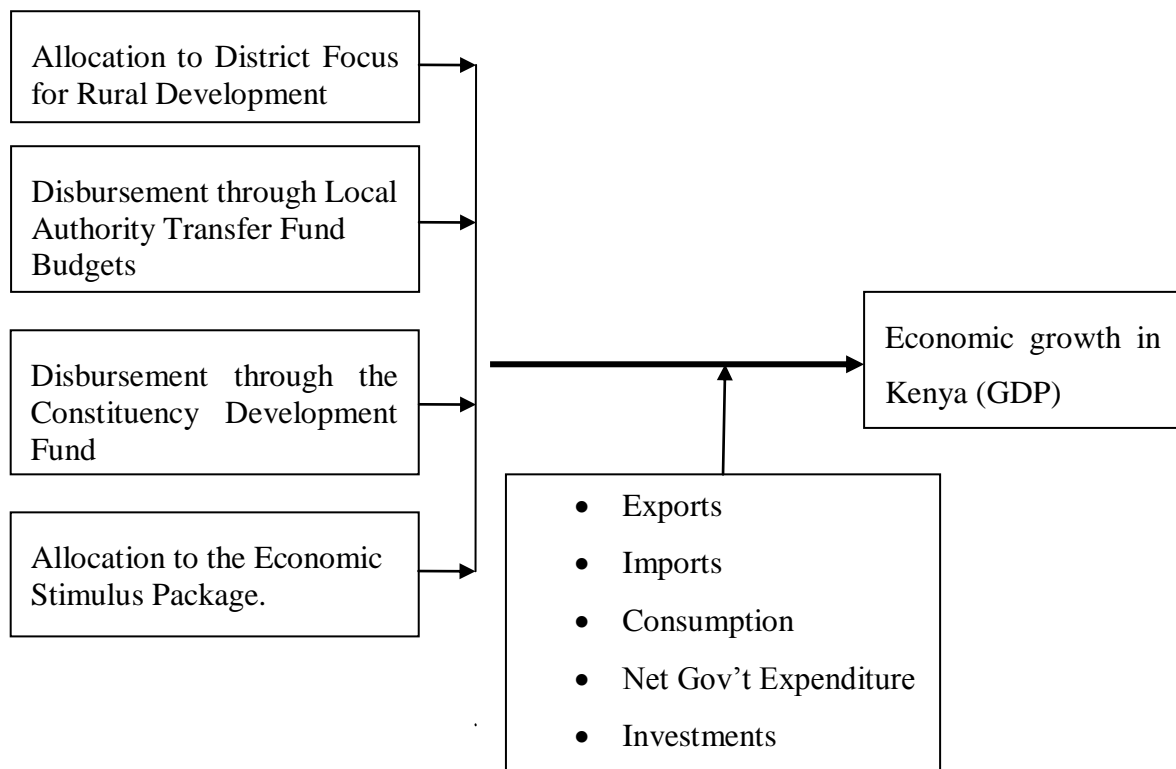
The key objectives of ESP were to boost the country's economic recovery, Invest in long term solutions to the challenges of food security, expand economic opportunities in rural areas for employment creation, promote regional development for equity and social stability, improve infrastructure and the quality education and healthcare, Invest in the conservation of the environment, expand the access to, and build the ICT capacity in order to expand economic opportunities and accelerate economic growth(GoK 2010).

Activities covered under the ESP include: Expansion of irrigation-based agriculture, construction of wholesale and fresh produce markets, construction and stocking of fishponds with fingerlings, provision of aquaculture advisory services, construction of Juakali sheds Tree planting construction of social infrastructure such as schools, health centres and roads. Since its inception ESP managed to realise its objectives with the economic growth rate showing a positive trend.

## **2.6 Conceptual Framework**

The conceptual framework is presented in a schematic interpretation explaining the relationship. Figure 1 shows the relationship between the dependent and independent variables.

**Figure 1: Conceptual Framework**



**Independent variables**

**Moderating**

**Dependent Variables**

## 2.7 Summary and Gaps

The empirical evidence on the impact of decentralisation in Kenya since independence has not been exploited fully due to their nature. Most decentralization programs have remained short term in nature and therefore no meaning full study of their impact has been done. Overall, these studies, as well as anecdotal evidence and theoretical work, suggest that the performance of decentralized service delivery depends on the design of decentralisation and institutional arrangements that govern its implementation. Little effort has been done by researchers to correlate any form of decentralisation with the economic growth. That is what this particular study sought to address.

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Introduction**

This chapter presented the procedures used in conducting the study, focusing on methodology, target population, sample and sampling procedures, research instruments, and data collection and analysis procedures.

### **3.2 Data type and source**

This study relied heavily on secondary data available at the government printers, Kenya bureau of statistics, The Kenya national library, economic surveys, World bank website and the GoK Public Expenditure Review Reports at the Ministry of Devolution, planning and Vision 2030, National treasury library, KIPPRA Library and National Archives. Data collected was used to test the competing performance of various decentralization strategies by the government as to their impact on the economic growth.

The study examined economic trends over three decades from 1981 to 1990, 1991 to 2000 and 2001 to 2010. The study narrowed down to four major decentralization strategies to enable the researcher to make a more detailed examination of their performance. The study took a quantitative approach.

### **3.3 Data Sources**

This study used secondary data obtained from the National Bureau of Statistics and the World Bank database and other government institutions. The data was time series ranging from 1981 to 2011.

### **3.4 Data Analysis and presentation**

Regression analysis was used to determine the financial impact of the devolved system of governance to economic growth in Kenya. The analysis was used to determine the extent to

which devolved system of governance financially impacts on economic growth. Regression equation was estimated for the period 1981 to 2011 with regard to a given strategy that was in place i.e. 1981 to 1998 DFRD, 1999 to 2002 LATF, 2003 to 2007 CDF, 2003 to 2011 CDF and ESP and 2007 to 2011 ESP.

Statistics estimated coefficient of determination to determine the proportion of economic growth determined by financial impact of the devolved system, correlation coefficient determined the relationship and the t-test determined the significance of the relationship. Graphs and charts were used in addition to text and tables to communicate the findings and due care was taken to ensure that the overall format contributes to the clarity of the data in the tables and prevents misinterpretation. This included spacing; the wording, placement and appearance of titles; row and column headings and other labeling. (Binder & Roberts. 2009) The researcher used the following regression equation.

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 z + \varepsilon$$

Where  $\alpha_0 \dots \alpha_4$  are coefficients to be estimated

Y is level of GDP

$X_1$  is DFRD

$X_2$  is LATF

$X_3$  is CDF

$X_4$  is ESP

z is a matrix of Control variables namely, Imports, exports and Net Government Expenditure

$\varepsilon$  is the error term.



Where need be to avoid specification error moderating variables was estimated and formed the control variables. The values for DFRD,LATF,CDF and other control variables were measured in natural log form.

ESP is measured as a dummy where “1” is years after introduction of ESP and “0” to measure years before introduction of ESP. The justification of the use of a dummy is because ESP was a combination of monetary incentives and policy incentives.

### **3.5 Econometric methodology: Estimation and Hypothesis Testing**

This study used a time series regression model to evaluate the effect of SAPs on agriculture production in Kenya. Applying the standard OLS method to non-stationary data series could produce ‘nonsense correlation’ or ‘spurious regression’ (Inder, 1993). That is, the OLS regression could give high R-squared, low Durbin Watson (DW) statistics and significant t-values of the estimated coefficients suggesting a significant relationship between dependent and explanatory variables when in fact they were completely unrelated. A time series approach was therefore preferred.

In order to guard against the possibility of a spurious relationship while maintaining the level information, error correction modeling (ECM) developed by Hendry and his co-researchers (Hendry et al., 1984, Hendry, 1995) was adopted. The ECM method developed by Hendry (1995) was applied to the data series that are integrated of different orders (Hendry, 1995).

#### **3.5.1 Step 1: Normality Testing**

Normality testing involves checking for outliers in the data. Data that has outliers exhibit significant skewness and kurtosis coefficient. The Jacque Bera test combines both the skewness and kurtosis coefficient into a concrete measure of normality.

The null hypothesis under Jacque Bera test was that the distribution of the data was not significantly different from that of a normal distribution. In case the variables are not normally distributed under the Jacque Bera test the most conclusive will be the normality of error term resulting from the regression.

### **3.5.2 Step 2: Heteroscedasticity Test**

Heteroscedasticity checked whether the error term was constant across the observations. The tests were carried out using the white tests. The conditions were corrected by applying corrected standard errors.

### **3.5.3 Step 3: Autocorrelation Test**

Autocorrelation tests were conducted to check whether the error terms were correlated across time. The LM test is conducted to test for the first order autocorrelation and a Durbin Watsons statistic of close to two indicates that autocorrelation does not exist.

### **3.5.4 Step 4: Unit roots**

The fourth stage was to conduct unit root tests on each variable. In most cases economic variables are non-stationary at level and therefore they result in spurious regression results being obtained. To avoid the spurious results the unit roots are performed. If variables are non-stationary, then the first step could be to first differences the non-stationary series until a state of stationarity is achieved. The Augmented Dickey-Fuller (ADF) test was employed in this study to test the time-series properties of the data series. The ADF tests the null hypothesis of non-stationarity against the alternative hypothesis of stationarity. The P-Perron tests were also useful in testing or unit roots.

The ADF and P-Perron test assumed the following null hypothesis;

*Ho: The variable was non stationary (i.e. it has a unit root)*

*Ha: The variable was stationary (i.e. it has no unit root)*

It was at this stage that first and second differences were conducted if necessary.

### **3.5.5 Step 5: Testing for co integration**

The fifth stage involved the testing of the existence of cointegrating equations. The long run relationship could be established by conducting co integration tests for the mixture of stationary and non-stationary series. Two methods were available for this. The first method was the two step Engel granger method. Co integration using the two step Engel granger method involved generating residuals from the long run equation of the non-stationary variables. To establish whether variables were co integrated, the stationarity of the residuals was established by applying the ADF and PP tests. If the residuals were stationary at levels, then it would be concluded that there was both a short run and a long run relationship among the variables.

The second method was the Johansen co integration test. However, the Johansen co integration was cited as more robust and more accurate in identifying the presence of co integration. The Johansen test required that the appropriate lag length to be known. The lag length (p) was determined by the Schwarz criterion to ensure that the residual was white noise.

### **3.5.6 Step 6: Error correction modeling**

The sixth step was to establish the short run relationship between the variables. However, the short run relationship was only established a) after converting all non-stationary series into stationary series (either by differencing or by de trending) b) after successfully testing for co

integration and after using the residuals from the Cointegration model to generate an error correction term(ECT), which was inserted into the short run model.

This study employed the error correction modeling (ECM) procedure of Hendry (1995). This approach minimized the possibility of estimating spurious relationships while retaining long-run information without arbitrarily restricting the lag structure (Hendry, 1995). The ECM also provided estimates with valid t-statistics even in the presence of endogenous explanatory variables (Inder, 1993).

### **3.6 Ethical issues**

The information obtained from this study would be only used for the fulfilment of the researcher's academic requirement. The information would not be divulged to any third parties at any cost. In the event of the study it was be possible to come across other important government information and data that was confidential. The researcher restricted himself to whatever data relevant to the study only. Efforts were done to meet all necessary compliance requirements in accessing any government facility and sites. (Creswell, 2009)

## CHAPTER FOUR: DATA ANALYSIS

### 4.0 Introduction

The purpose of this study was to establish the nature and causal relationship between devolved funds and economic growth. The GDP as a measure of economic growth was modelled against several variables namely; DFRD, LATF, CDF, ESP Imports, Exports, Consumption, Investment, and Net Government Expenditure.

### 4.1 Descriptive Statistics

The results in table 4.1 provide the descriptive statistics of the variables namely; GDP, DFRD, LATF, CDF and ESP, Imports, Exports, Consumption, Investment, and Net Government Expenditure for the period 1980 to 2012.

**Table 4.1 Descriptive Statistics**

	<b>GDP Billion</b>	<b>CDF Million</b>	<b>Consumption Billion</b>	<b>DFRD Million</b>	<b>Exports Billion</b>	<b>Imports Billion</b>	<b>LATF Billio n</b>	<b>Netgov Expend Billion</b>
<b>Mean</b>	992	3,720	918	49.53	261	368	3.54	1,090
<b>Maximum</b>	3,440	23,000	3,250	166	939	1,530	19.10	3,990
<b>Minimum</b>	80	1	63	1	21	23	1.0	81.40
<b>Std. Dev.</b>	938	6,350	891	68.068	257	406	5.37	1,070
<b>Observations</b>	30	30	30	30	30	30	30	30

The table 4.1 above indicates that the Mean GDP for the period 1980 to 2012 was 992 billion whereas the maximum and minimum values were 3440 billion and 80 billion respectively and had a deviation of 938 billion. The CDF allocation on average was 3,720 million and the maximum allocation was 23,000 million and the minimum allocation being 1 billion. The standard deviation for this allocation was 6, 350 million. The consumption expenditure for the period of study had an average value of 918 billion and its associated standard deviation was 891 billion. The maximum consumption expenditure was 3,250 billion and its minimum level was 63 billion. Similarly, the District Focus for Rural Development (DFRD) average values for the period was 49.53 billion whereas the standard deviation for this period was at

68.068 billion. The maximum values and minimum values for District Focus for Rural Development being 166 and 1 billion respectively.

The country's value of exports over the period of study was 261 billion and its associated standard deviation was 257 billion. On the other hand the value of imports over the same period was at 368 million with its standard deviation being 406 billion. From this statistics, it can be seen that the value of imports exceeded the value of exports. LATF allocations over the same period of study had an average of 3.54 and a standard deviation of 5.37. The recorded maximum values for this variable was 19.10 billion while the minimum values for LATF allocations were 1 billion. On the other hand net government expenditure had an average and mean value of 1,090 billion and 1,070 billion respectively.

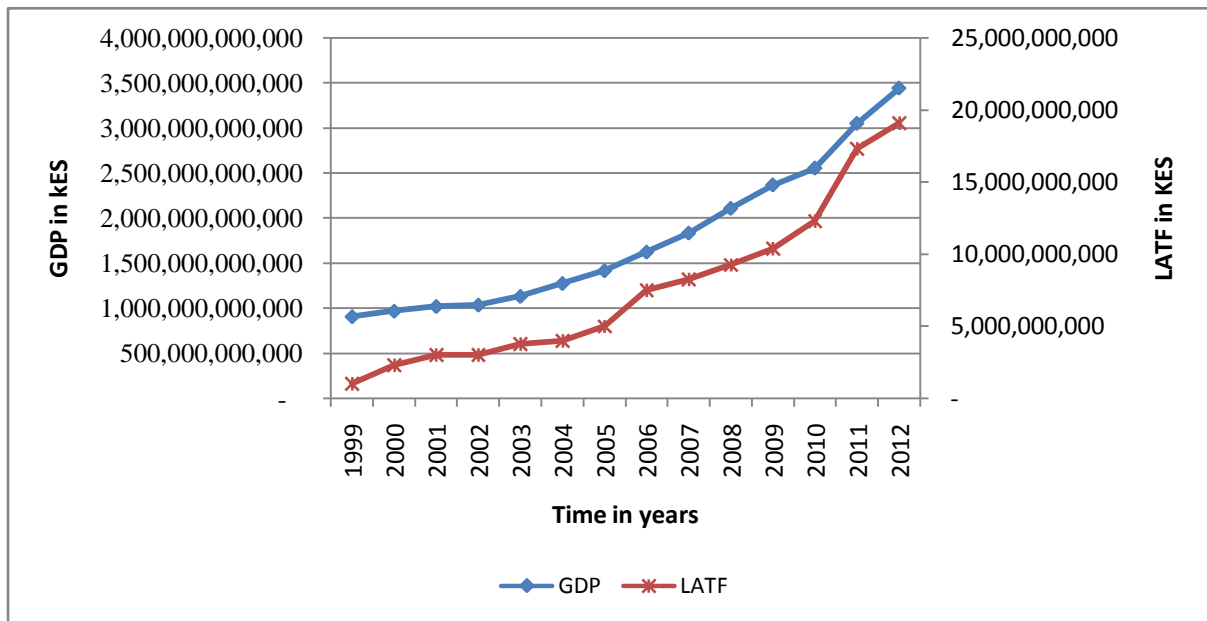
## **4.2 TREND ANALYSIS**

This section provides graphical representation of the movement and changes of the variables under study over the years 1980 to 2013

### **4.2.1 Trend Analysis of LATF against GDP**

Figure 4.1 presents the trend analysis of GDP and LATF over the period 1999 to 2012. LATF allocation as depicted in the figure 4.1 below has been rising. The GDP also showed an upward trend since 1999 to 2012. This therefore implies that there is a strong positive association between the two variables.

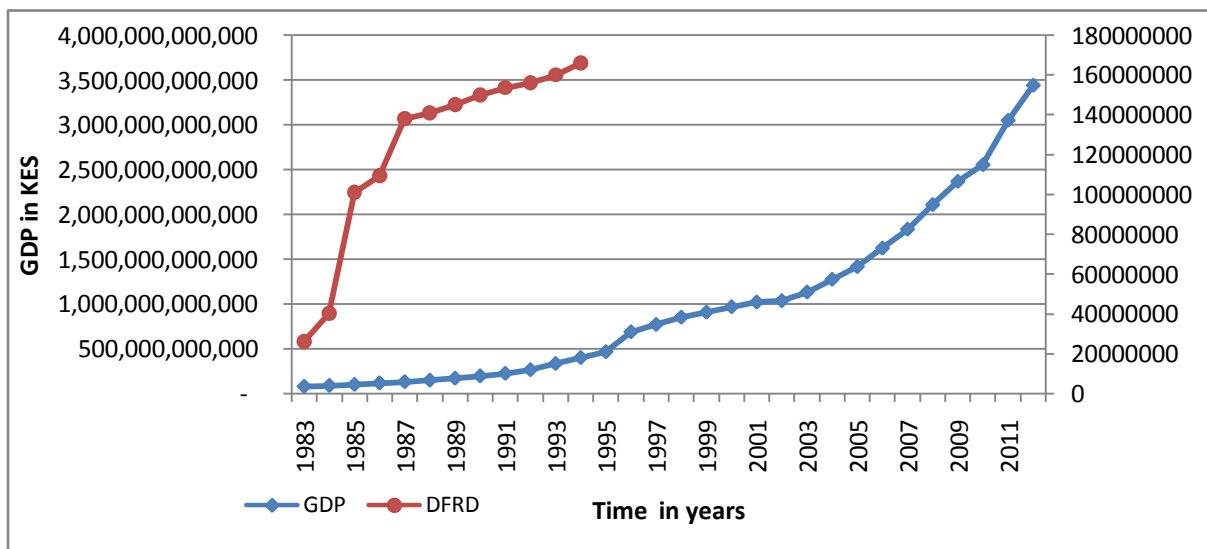
**Figure 4.1 Trend Analysis of GDP and LATF.**



**4.2.2 Trend Analysis of GDP and DFRD**

The results in Figure 4.2 show the trend analysis of GDP and DFRD for the period 1983-2012. Since 1980's, the GDP has been consistently on the rise. Similarly, the DFRD has been rising at an increasing rate till 1994. However, the allocation to DFRD dropped to Zero in the year 1995 and the allocation has not been resumed up to date. This therefore implies a positive association between GDP and DFRD.

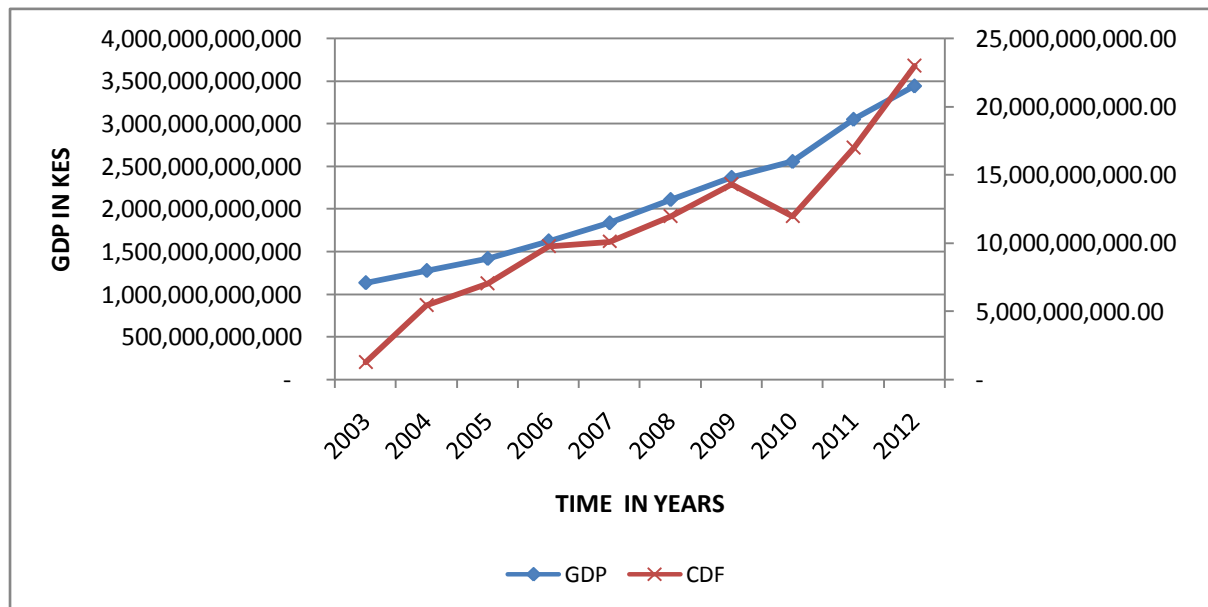
**Figure 4.2 Trend Analysis of GDP and DFRD**



### 4.2.3 Trend Analysis of GDP and CDF

Results in Figure 4.3 show the trend analysis of GDP and CDF for the period 1983 to 2012. The CDF allocation for the period 1983 to 2002 was non-existent. Between 2002 and 2008, CDF increased at an increasing rate. CDF dropped between 2008 and 2010 because of post-election violence as well as the global financial meltdown of year 2009/2010. It increased at an increasing rate between 2010 and 2012. On the other hand, the GDP showed an upward increase since 1983 to 2012. This therefore implies that there is a positive association between the two variables.

**Figure 4.3 Trend Analysis of GDP and CDF**

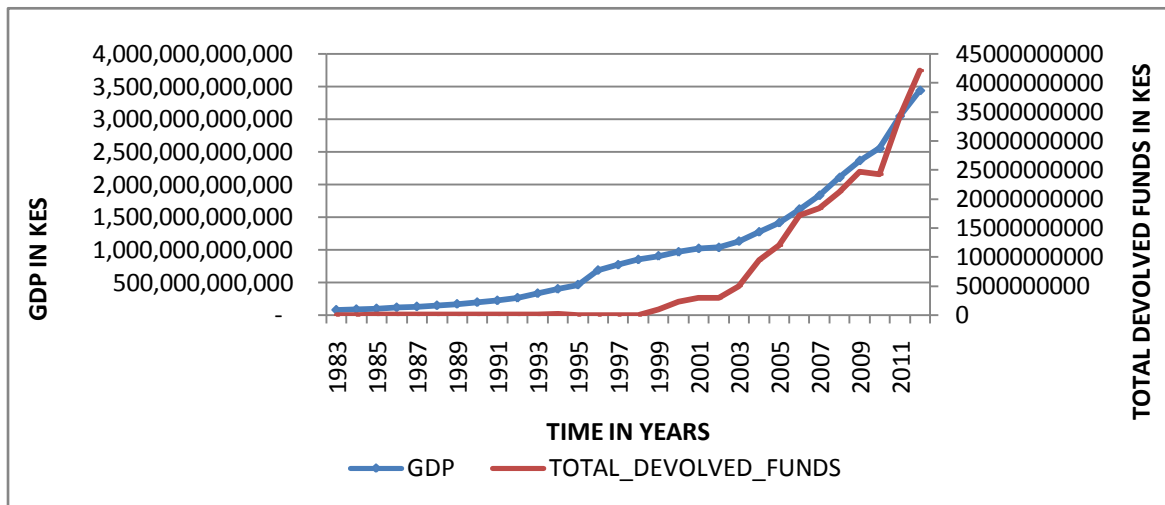


### 4.2.4 Trend Analysis of GDP and Total Devolved Funds

Figure 4.4 presents the trend analysis of GDP and total devolved funds between 1983 and 2012. From the graphical presentation, total devolved funds have been persistently constant at zero between 1983 and 1998. This implies that during this period of time there were no allocations made. From the figure 4.4 below it is evident that there is a positive correlation between GDP and total devolved funds.



**Figure 4.4 Trend analysis GDP and Total Devolved Funds**



### 4.3 Pre-Estimation Tests

#### 4.3.1 Normality Tests

The table 4.2 below presents the test for normality of the variables used in the study. The skewness coefficient indicates the variables are not skewed since they lie within the accepted rule of thumb of -1 and +1. Similarly, the kurtosis coefficients of the variables indicate that the variables are normally distributed since the coefficients are within the accepted range of -3 and +3. The Jarque Bera test for normality is thus used to determine whether the variables are normally distributed or not. The null hypothesis in this case is that the variables are not significantly different from a normal distribution. The Jarque Bera probability value of all the variables in this case is greater than the critical 5 percent and thus they are insignificant implying that the variables are normally distributed.

**Table 4.2 Normality tests**

	LN GDP	LN CDF	LN CONSU MPTION	LN DFR D	LN EXPO RTS	LN IMPORTS	LN INVEST MENTS	LN LATF	LN NETGOV EXPEND
Skewness	-0.23	0.71	-0.25	0.41	-0.23	-0.12	-0.06	0.14	-0.19
Kurtosis	1.76	1.51	1.72	1.18	1.85	1.82	1.92	1.03	1.75
Jarque-Bera	2.18	5.30	2.37	5.01	1.93	1.81	1.48	4.95	2.14
Probability	0.34	0.07	0.31	0.08	0.38	0.40	0.48	0.08	0.34
Observations	30	30	30	30	30	30	30	30	30

**4.3.2 Multi-collinearity Tests (Pearson Correlation)**

Results in Table 4.3 below present results of Pearson's bivariate correlation. The results indicate that the variables that had positive correlation. From the table 4.3 below is clear that Consumption and GDP are positively correlated (0.999). This correlation is found to be significant at both 5% and 1%. LATF is also found to be positively correlated with GDP (0.958) and that this correlation is significant at both 5% and at 1%. Net government expenditure is perfectly correlated with GDP (1.00) and that the relationship between the two variables are significant ( $p < 0.01$ ). The variable Investment is also found to be positively correlated with GDP (0.992) and is significant ( $p < 0.01$ ). DFRD and CDF are also found to be highly correlated with GDP and the correlation found to be also significant ( $p < 0.01$ ).

**Table 4.3 Correlation Matrix**

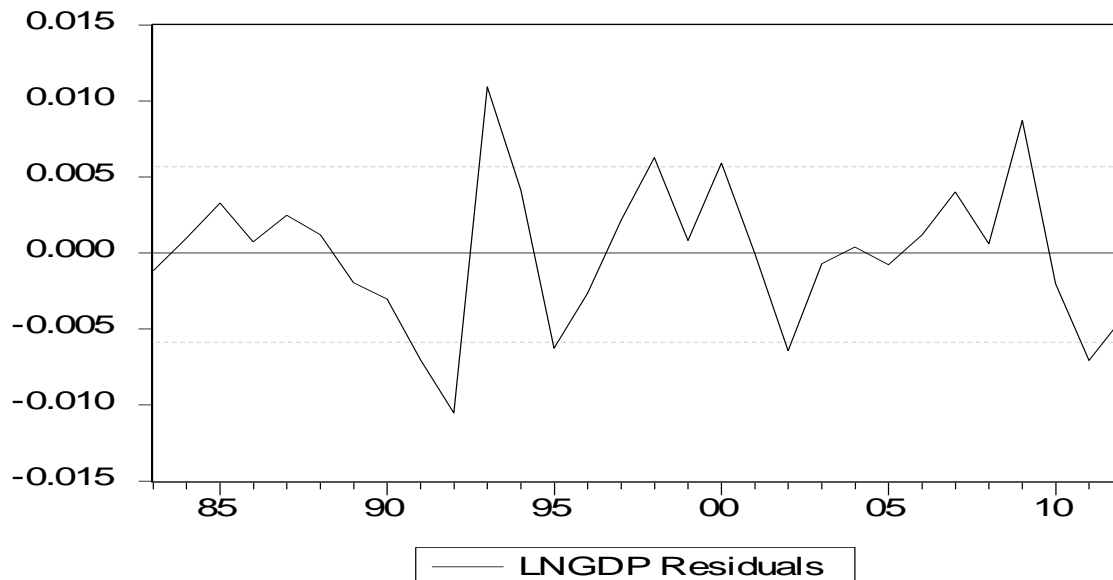
	LnGDP	Ln Imports	Ln Exports	Ln Consumption	Ln LATF	Ln Govt Exp	Ln Investments	Ln DFRD	Ln CDF
LnGDP	1								
Ln Imports	0.997**	1							
Ln Exports	0.992**	0.995**	1						
Ln Consumption	0.999**	0.994**	0.988**	1					
Ln LATF	0.958**	0.968**	0.973**	0.958**	1				
Ln Govt Exp	1.000**	0.997**	0.990**	0.999**	0.956**	1			
Ln Investments	0.992**	0.995**	0.986**	0.990**	0.962**	0.994**	1		
Ln DFRD	0.761**	0.717**	0.646*	0.762**	0.67.	0.783**	0.859**	1	
Ln CDF	0.865**	0.890**	0.890**	0.854**	0.862**	0.867**	0.877**	0.560	1

\*. Correlation is significant at the 0.05 level (2-tailed).

### 4.4.3 Normality of the Residuals

The plot of residuals reveals the absence of trends and outliers.

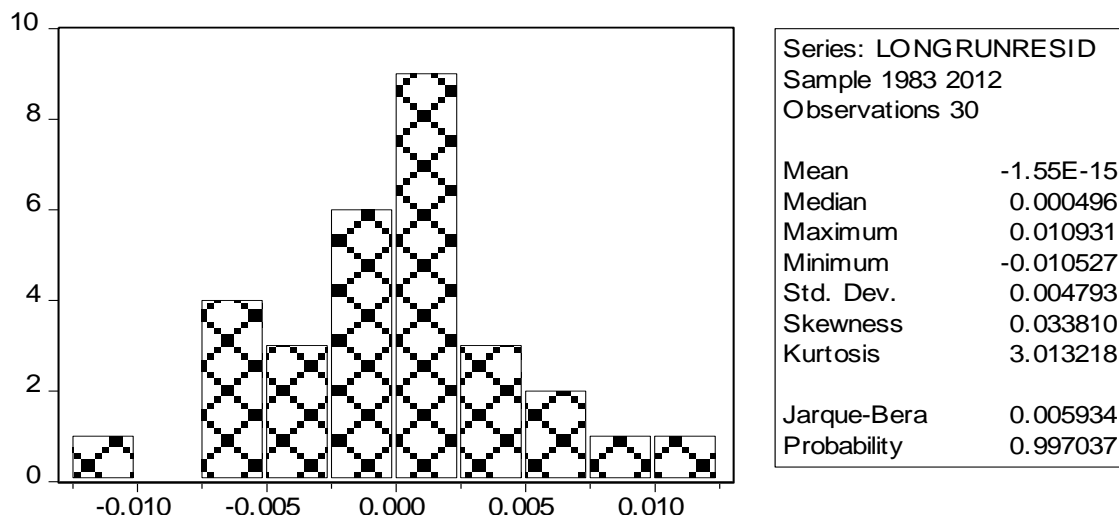
**Figure 4.5** Figure of Normality for residuals



The most conclusive test of normality is the testing of the normality of the residuals. The residuals were obtained from running the following equation.

$$\text{LNGDP} = \beta_0 - \beta_1 \text{LNCDF} + \beta_2 \text{LNCONSUMPTION} + \beta_3 \text{LNDFRD} + \beta_4 \text{LNEXPORTS} - \beta_5 \text{LNIMPORTS} + \beta_6 \text{LNINVESTMENTS} + \beta_7 \text{LNLATF} + \beta_8 \text{LNNETGOVEXPEND} + \beta_9 \text{ESP} + \xi_{1t}$$

The error term,  $\xi_{1t}$  was test for normality and the results are given below. The error term is therefore normally distributed ( $p = 0.997$ )



#### 4.4.4 Heteroscedasticity of residuals

Heteroscedasticity test was run in order to test whether the error terms are correlated across observation in the time series data. The null hypothesis is that the data does not suffer from Heteroskedasticity. The null hypothesis is not rejected given that the reported p-value 0.1245 in table 4.4 below was greater than the critical value and thus concluded that the observations have constant variance or do not suffer from Heteroskedasticity.

**Table 4.4 White Heteroskedasticity Test**

F-statistic	2.486478	Probability	0.052054
Obs*R-squared	22.61135	Probability	0.124526

#### 4.3.4 Serial Correlation/Auto Correlation

Serial correlation tests were run in order to check for correlation of error terms across time periods. Serial/auto correlation is tested using the Breusch-Godfrey serial correlation LM test. The null hypothesis is that no first order serial /auto correlation exists. The p value of 0.449791 indicates that we do not reject the null hypothesis and conclude that serial correlation does not exist. These results are presented in Table 4.5 below;

**Table 4.5 Test for serial/Autocorrelation**

F-statistic	0.388176	Probability	0.540300
Obs*R-squared	0.571178	Probability	0.449791

**4.4 Unit root test**

Prior to testing for a causal relationship and co integration between the time series, the first step is to check the stationarity of the variables used in the model. The aim is to verify whether the series have a stationary trend, and, if non-stationary, to establish orders of integration. The study used both Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) tests to test for stationarity. The test results of the unit roots (intercept only) are presented next; Results in table 4. 6 indicated that all variables are non-stationary (i.e. presence of unit roots) at 1%, 5% and 10% levels of significance. This calls for first differencing of the non-stationary variables.

**Table 4.6: Unit root tests-Level**

Variable name	ADF test	PP test	1% Level	5% Level	10% Level	Comment
LnGDP	-1.123787	-1.123787	-3.6752	-2.9665	-2.6220	Non Stationary
LnDFRD	-1.126558	-1.126558	-3.6752	-2.9665	-2.6220	Non Stationary
LnConsumption	-1.026169	-1.026169	-3.6752	-2.9665	-2.6220	Non Stationary
LnExports	-0.643704	-0.643704	-3.6752	-2.9665	-2.6220	Non Stationary
LnImports	-0.365699	-0.365699	-3.6752	-2.9665	-2.6220	Non Stationary
LnInvestments	-0.498115	-0.498115	-3.6752	-2.9665	-2.6220	Non Stationary
LnLATF	-0.744536	-0.744536	-3.6752	-2.9665	-2.6220	Non Stationary
LnNetGovExpen	-0.846701	-0.846701	-3.6752	-2.9665	-2.6220	Non Stationary

Table 4.7 shows the Unit root results after first difference. This implies that all the variables become stationary on first difference.

**Table 4.7: Unit root tests-First Differencing**

Variable name	ADF test	PP test	1%	5%	10%	Comment
DlnGDP	-3.826360	-3.826360	-3.6852	-2.9705	-2.6242	Stationary
DlnDFRD	-5.265916	-5.265916	-3.6852	-2.9705	-2.6242	Stationary
DlnConsumption	-3.872485	-3.872485	-3.6852	-2.9705	-2.6242	Stationary
DlnExports	-5.066994	-5.066994	-3.6852	-2.9705	-2.9705	Stationary
DlnImports	-4.866402	-4.866402	-3.6852	-2.9705	-2.6242	Stationary
DlnInvestments	-6.117507	-6.117507	-3.6852	-2.9705	-2.6242	Stationary
DlnLATF	-5.126084	-5.126084	-3.6852	-2.9705	-2.6242	Stationary
Dlnnetgovexpend	-3.291824	-3.291824	-3.6852	-2.9705	-2.6242	Stationary

**4.5 Cointegration Tests**

Then stationarity of the lagged residual was tested using ADF. The two step Engle Granger test of Cointegration results indicate that the lagged residual is stationary (i.e. has no unit roots) at 1%, 5% and 10% levels. This implies that all the variables in the model estimating LNGDP do converge to an equilibrium in the long run (i.e. are cointegrated).

**Table 4.8: Engle-Granger Co-Integration test**

variable	ADF TEST	1%	5%	10%
Lagged residual	-4.439636	-3.6852	-2.9705	-2.6242

**4.6 Johansen Cointegration test**

The Johansen Cointegration test was also conducted since it is more accurate and superior to Engle granger test of Cointegration. Johansen Results at the appendix indicate that the null hypothesis of at most 2 Cointegration equations for the model linking LNGDP to its determinants was rejected at 5% significance level. The likelihood ratio statistic for the null hypothesis of the existence of at most 2 Cointegration equations was larger than the z critical values at 5% level. This implies that 3 co integrating equation exists. This further implies that

all the variables in the LNGDP model converge to an equilibrium in the long run (i.e. are cointegrated).

**Table 4.9: Johansen Cointegration test**

Eigen value	Likelihood Ratio	5 Percent Critical Value	1 Percent Critical Value	Hypothesized No. of CE(s)
0.978378	361.4091	263.42	279.07	None **
0.889392	250.2217	222.21	234.41	At most 1 **
0.828692	186.3705	182.82	196.08	At most 2 *
0.738429	135.2061	146.76	158.49	At most 3
0.636031	96.31566	114.90	124.75	At most 4
0.493049	67.00573	87.31	96.58	At most 5
0.454019	47.30486	62.99	70.05	At most 6
0.356662	29.75487	42.44	48.45	At most 7
0.285052	16.96340	25.32	30.45	At most 8
0.220731	7.232569	12.25	16.26	At most 9

\*(\*\*) denotes rejection of the hypothesis at 5%(1%) significance level

L.R. test indicates 3 cointegrating equation(s) at 5% significance level

#### 4.7 Discussion of the Long Run Model Results

Table 4.10 above presented the long run results. The R squared of the model 0.999983 indicated that the overall goodness of fit was satisfactory. This implies that 99% of the variances in LNGDP are explained by the variances in independent variables. The F statistic of 130748.9 (p value 0.0000) indicated that the independent variables have good joint explanatory power. Long run LNLATF was positively but insignificantly related to Long run LNGDP (beta coefficient= 1.31E-05; p-value=0.9524). Long run LNCONSUMPTION was positively but insignificantly related to Long run LNGDP (beta coefficient= 0.063853; p-value=0.2885). Long run LNDFRD was positively but insignificantly related to Long run LNGDP (beta coefficient= 0.000375; p-value=0.3690). Long run LNEXPORTS was positively but insignificantly related to Long run LNGDP (beta coefficient= 0.282480; p-

value=0.0000). Long run LNINVESTMENTS was positively but insignificantly related to Long run LNGDP (beta coefficient= 0.010539; p-value=0.5099). Long run LNNETGOVEXPEND was positively but insignificantly related to Long run LNGDP (beta coefficient= 0.964998; p-value=0.0000).

#### Table 4.10 Long Run Model

Dependent Variable: LNGDP

Method: Least Squares

Sample: 1983 2012

Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNCDF	-0.000176	0.000202	-0.870327	0.3944
LNCONSUMPTION	0.063853	0.058564	1.090307	0.2885
LNDFRD	0.000375	0.000408	0.919137	0.3690
LNEXPORTS	0.282480	0.017606	16.04459	0.0000
LNIMPORTS	-0.317775	0.032374	-9.815694	0.0000
LNINVESTMENTS	0.010539	0.015709	0.670934	0.5099
LNLATF	0.000013	0.000217	0.060450	0.9524
LNNETGOVEXPEND	0.964998	0.078511	12.29119	0.0000
ESP	-0.003892	0.005698	-0.683100	0.5024
C	-0.119285	0.129714	-0.919603	0.3687
R-squared	0.999983	Mean dependent var		27.08115
Adjusted R-squared	0.999975	S.D. dependent var		1.162559
S.E. of regression	0.005771	Akaike info criterion		-7.210654
Sum squared resid	0.000666	Schwarz criterion		-6.743588
Log likelihood	118.1598	F-statistic		130748.9
Durbin-Watson stat	1.702972	Prob(F-statistic)		0.000000

#### Long-Run Equation

$$\text{LNGDP} = -0.119285 - 0.0002 \text{LNCDF} + 0.064 \text{LNCONSUMPTION} + 0.0004 \text{LNDFRD} \\ + 0.2825 \text{LNEXPORTS} - 0.3178 \text{LNIMPORTS} + 0.01054 \text{LNINVESTMENTS} \\ + 0.000013 \text{LNLATF} + 0.9650 \text{LNNETGOVEXPEND} - 0.003892 \text{ESP}$$

#### 4.5 Discussion of the Error Correction Model Results

Since the variables in the model linking LNGDP to the determinants are cointegrated, then an error-correction model can be specified to link the short-run and the long-run relationships. Residuals from the co-integrating regression are used to generate an error



correction term (lagged residuals) which is then inserted into the short-run model. The specific lagged residuals are lagresid.

The estimates of the error-correction model are given in table 4.11 below; the short run results in table 5.2 indicated that the goodness of fit (R squared) for the short run model was 0.997 meaning that LNCONSUMPTION, LNEXPORTS, LNINVESTMENTS, LNNETGOVEXPEND, LNDFRD explain 99.7% of the variation in LNGDP. The F-statistic of 770.3523 indicates that the overall model was statistically significant. The relationship between the short run LNGDP and short run LNCONSUMPTION, short run LNLATF, short run LNEXPORTS, short run LNINVESTMENTS, short run LNNETGOVEXPEND and short run LNDFRD are therefore positive and significant. This implies that an increase in the short run LNCONSUMPTION by 1% increases the LNGDP by 11.9%. Increase in the short run LNLATF by 1% increases the LNGDP by 0.02%. Increase in the short run LNEXPORTS by 1% increases the LNGDP by 27.9%. Increase in the short run LNDFRD by 1% increases the LNGDP by 0.02%. Increase in the short run LNINVESTMENTS by 1% increases the LNGDP by 4.8%. Increase in the short run LNNETGOVEXPEND by 1% increases the LNGDP by 88.65%.

The error correction term measures the speed of adjustment to the long run equilibrium in the dynamic model. The error correction term LAGRESID has the expected sign and is significantly negative (-0.966549, p value = 0.001). This result implies that there is a negative gradual adjustment (convergence) to the long run equilibrium. The coefficient of (-0.966549) indicates that -0.966549% of the disequilibria in short run GDP achieved in one period are corrected in the subsequent period.

**Table 4.11 Error Correction Model**

Dependent Variable: DLNGDP

Method: Least Squares

Sample(adjusted): 1984 2012

Included observations: 29 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLNCDF	-0.000297	0.000214	-1.388853	0.1818
DLNCONSUMPTION	0.119500	0.030285	3.945786	0.0009
DLNDFRD	0.000969	0.000261	3.712883	0.0016
DLNEXPORTS	0.279112	0.012860	21.70397	0.0000
DLNIMPORTS	-0.304335	0.017706	-17.18797	0.0000
DLNINVESTMENTS	0.048279	0.010002	4.827094	0.0001
DLNLATF	0.000192	0.000214	0.897774	0.3812
DLNNETGOVEXPEND	0.886514	0.040039	22.14100	0.0000
ESP	-0.001196	0.001877	-0.637248	0.5320
LAGRESID	-0.966549	0.194314	-4.974151	0.0001
C	-0.002933	0.002190	-1.339109	0.1972
R-squared	0.997669	Mean dependent var		0.129874
Adjusted R-squared	0.996374	S.D. dependent var		0.065938
S.E. of regression	0.003971	Akaike info criterion		-7.938066
Sum squared resid	0.000284	Schwarz criterion		-7.419436
Log likelihood	126.1020	F-statistic		770.3523
Durbin-Watson stat	1.912090	Prob(F-statistic)		0.000000

**Short-Run Equation**

$$\begin{aligned}
\text{DLNGDP} = & -0.002933 - 0.000297\text{DLNCDF} + 0.1195\text{DLNCONSUMPTION} + \\
& 0.000969\text{DLNDFRD} + 0.279112\text{DLNEXPORTS} - 0.304335\text{DLNIMPORTS} + \\
& 0.048279\text{DLNINVESTMENTS} + 0.000192\text{DLNLATF} + \\
& 0.886514\text{DLNNETGOVEXPEND} - 0.001196\text{ESP} - 0.966549\text{LAGRESID}
\end{aligned}$$

**Table 4.12 Parsimonious Long-Run Model**

Dependent Variable: LNGDP

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNCONSUMPTION	0.060861	0.050037	1.216323	0.2362
LNEXPORTS	0.294248	0.013067	22.51846	0.0000
LNIMPORTS	-0.338224	0.026852	-12.59566	0.0000
LNINVESTMENTS	0.012804	0.014697	0.871192	0.3927
LNTOTALDEVOLVEDFUNDS	-2.66E-05	0.000175	-0.151866	0.8806
LNNETGOVEXPEND	0.971746	0.071110	13.66532	0.0000
C	-0.049899	0.113219	-0.440735	0.6635
R-squared	0.999981	Mean dependent var		27.08115
Adjusted R-squared	0.999976	S.D. dependent var		1.162559
S.E. of regression	0.005657	Akaike info criterion		-7.311031
Sum squared resid	0.000736	Schwarz criterion		-6.984085
Log likelihood	116.6655	Hannan-Quinn criter.		-7.206438
F-statistic	204155.4	Durbin-Watson stat		1.758004
Prob(F-statistic)	0.000000			

$$\text{LNGDP} = -0.049899 + 0.060861\text{LNCONSUMPTION} + 0.294248\text{LNEXPORTS} - 0.338224\text{LNIMPORTS} + 0.012804\text{LNINVESTMENTS} - 2.66\text{E-}05\text{LNTOTALDEVOLVEDFUNDS} + 0.971746\text{LNNETGOVEXPEND}$$

**Table 4.13 Parsimonious Short-Run model**

Dependent Variable: DLNGDP

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLNCONSUMPTION	0.114885	0.034300	3.349398	0.0032
DLNEXPORTS	0.290818	0.013788	21.09250	0.0000
DLNIMPORTS	-0.317681	0.019234	-16.51658	0.0000
DLNINVESTMENTS	0.048902	0.011180	4.374212	0.0003
DLNNETGOVEXPEND	0.898438	0.045157	19.89603	0.0000
DLNTOTALDEVOLVEDFUNDS	0.000513	0.000002	2.536310	0.0196
ESP	-0.000179	0.002090	-0.085751	0.9325
LAGRESID	-0.968769	0.197325	-4.909507	0.0001
C	-0.004584	0.002370	-1.934006	0.0674
R-squared	0.996665	Mean dependent var		0.129874
Adjusted R-squared	0.995331	S.D. dependent var		0.065938
S.E. of regression	0.004506	Akaike info criterion		-7.717892
Sum squared resid	0.000406	Schwarz criterion		-7.293559
Log likelihood	120.9094	Hannan-Quinn criter.		-7.584996
F-statistic	747.1313	Durbin-Watson stat		2.205123
Prob(F-statistic)	0.000000			

$$DLNGDP = -0.004584 + 0.114885DLNCONSUMPTION + 0.290818DLNEXPORTS - 0.317681DLNIMPORTS + 0.048902DLNINVESTMENTS + 0.898438DLNNETGOVEXPEND + 0.000513DLNTOTALDEVOLVEDFUNDS - 0.000179ESP - 0.968769LAGRESID$$

## **CHAPTER FIVE: SUMMARY AND CONCLUSIONS**

### **5.0 Introduction**

This chapter presents the summary of the findings of the study, conclusions; recommendations based on the study findings as well as suggested areas for further research.

### **5.1 Summary of Findings**

The study variables were found to be normally distributed as indicated by the Jarque Bera probability values ( $p > 0.05$ ). Similarly, the variables were found to be non-stationary at level and became stationary at first difference. This therefore implied that a short-run model linking a long-run model was also to be run. The variables were also tested for the presence of Heteroskedasticity and the results indicated that the variables were Homoskedastic ( $p > 0.05$ ). Results for the test for serial correlation also indicated that the error terms across observations were uncorrelated ( $p = 0.54$ ). Engle-granger test was also performed and the results indicated Cointegration existed between the variables.

#### **5.1.1 Long-Run Results.**

The long-run model results indicated that exports was positively and significantly related to Gross Domestic Product. The coefficient of Exports reported was 0.28 ( $p = 0.0000$ ). The results further indicated that imports had a negative ( $\beta = -0.32$ ) and the relationship was found to be significant ( $p = 0.0000$ ). The other variables that was found to be significant related to GDP was Net Government Expenditure ( $p = 0.0000$ ) and was positively related to GDP ( $\beta = 0.965$ ). Consumption and investments was not significantly related to GDP.

Results for devolved funds indicated that, DFRD, CDF, LATF and ESP were found to be insignificantly related to GDP ( $p > 0.05$ ). The parsimonious long run model also found that

total devolved funds allocations and the dummy for ESP was insignificantly related to long-run GDP ( $p=0.886$ )

### **5.1.2 Short-Run Results**

Given that the Engle-Granger test for Cointegration indicated that the variables were cointegrated an Error correction model was conducted which short the short run relationship between GDP and the independent variables of the study.

From the Error Correction Model the short run consumption was found to be positively related to GDP ( $\beta=0.12$ ) and that the relationship was significant as indicated by a p-value of 0.0009. The results further showed that short-run exports had a positive relationship with GDP ( $\beta=0.28$ ) and the relationship significant at 5% ( $p=0.0000$ )

Similarly, short-run Imports was found to be negatively related to short run GDP ( $\beta=-0.30$ ) and that this relationship was significant ( $p=0.0000$ ). The short run level of investments also indicated that there existed a positive association with short run GDP (0.05) and this relationship was significant ( $p=0.0001$ ). The short-run Net government expenditure was also positively related to short run GDP ( $\beta=0.87$ ) and significant ( $p=0.000$ ).

Short run DFRD allocations were significantly related to short run GDP ( $p=0.0016$ ). On the other hand, the short run CDF allocations was not significantly related to short run GDP ( $p=0.1818$ ). The lack of a significant relationship was also observed between short-run LATF allocations and short run GDP ( $p=0.38$ ). The dummy for ESP was not significantly related to short run GDP ( $p=0.5320$ ). The parsimonious short run model also found that total devolved funds allocations was significantly related to short run-run GDP ( $p=0.0196$ ).

## 5.2 Conclusion

It was concluded that there was Cointegration among the long run variables.

The long-run model results indicated that exports was positively and significantly related to Gross Domestic Product. The other variable that was found to be significant and positively related to GDP was Net Government Expenditure. This implied that an increase in exports and Net Government Expenditure led to an increase in GDP. The results further indicated that imports had a negative and significant relationship with GDP. This implied that an increase in imports led to a decrease in GDP. Consumption and investments was not significantly related to GDP.

Results for devolved funds indicated that long run DFRD, CDF, LATF and ESP were found to be insignificantly related to GDP. The parsimonious long run model also found that total devolved funds allocations and the dummy for ESP was insignificantly related to long-run GDP.

It was concluded that short-run Imports was found to be negatively related to short run GDP. Therefore, an increase in short run imports led to a decrease in short run GDP. The short run investments, short run Net government expenditure was also positively related to short run GDP. This implies that an increase in any of these variables resulted to an increase in short run GDP.

Short run DFRD allocations were significantly related to short run GDP. Therefore, increase in short run DFRD allocations lead to an increase in short runs GDP. On the other hand, the short run CDF allocations, short-run LATF allocations and ESP was not significantly related to short run GDP. The parsimonious short run model also found that total devolved funds allocations were significantly related to short run-run GDP. This implied that an increase in total devolved funds in the short run led to an increase in short run GDP.

It was concluded that the error correction term LAGRESID has the expected sign and is significantly negative. This result implies that there is a negative gradual adjustment (convergence) to the long run equilibrium. The coefficient indicates that the disequilibria in short run GDP achieved in one period are corrected in the subsequent period.

### **5.3 Recommendations**

The study recommends that government should carefully review their spending in a particular area that is likely to stimulate growth. Resources should be channelled to consumption, exports, investments, and net government expenditure as these variables have significant effect on GDP.

It is recommended that the government should increase the total amount of devolved funds as this stimulates growth in the short run. Specifically, more funds should be allocated to current Devolved Governments since there are more constitutional and proper policy designs as opposed to DFRD, LAFT, CDF and ESP.

### **5.4 Suggested Areas for Future study**

Further research should be to establish the impact of allocation of CDF, DFRD, LATF and ESP on the living standards of Kenyans. This is because the trickle-down effect to the poorest of the poor may not necessarily exist when GDP increases. Appropriate measures of living standards to be adopted in such a study are poverty indices, human development indices (health, education, mortality, employment). In addition, disaggregated studies at county level should be conducted. Such studies will attempt to establish the effect of total Devolved funds on the GDP growth of a country. It is also possible to do a study on the impact of Devolved funds in the current devolution structure since we are in the second year of allocation.



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## APPENDIX I



### KABARAK BUSINESS SCHOOL

P.O. Private Bag, 20157  
Kabarak, KENYA  
Email: [deanbusiness@kabarak.ac.ke](mailto:deanbusiness@kabarak.ac.ke)

Tel: 020-2035181  
Fax: 254-51-343529/343012  
[www.kabarak.ac.ke](http://www.kabarak.ac.ke)

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23<sup>rd</sup> September, 2013

**To Whom It May Concern:**

Dear Sir/Madam,

**RE: BEN SOLOMON CHEKWANDA – GMB/NE/0240/01/12**

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This is to confirm that the above named is a bonafide student of Kabarak University pursuing a Master of Business Administration degree (Finance Option).

Solomon has completed his coursework and currently carrying out a research on **"Financial Impact of Devolved Funds on Economic Growth in Kenya."**

Your assistance will be highly appreciated.

Thank you.

Yours faithfully,

**Prof. A. M. Katwalo**  
**DEAN**

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**Kabarak University Moral Code**

As members of Kabarak University family, we purpose at all times and all places, to set apart in one's heart,  
Jesus as Lord.  
(1 Peter 3:15)

## APPENDIX II



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2241349, 20-267 3550;  
0713 788 787, 0735 404 245  
Fax: +254-20-2213215

Email: [secretary@nacosti.go.ke](mailto:secretary@nacosti.go.ke)  
Website: [www.nacosti.go.ke](http://www.nacosti.go.ke)

9<sup>th</sup> Floor Utalii House  
Uhuru Highway  
P.O. Box 30623-00100  
NAIROBI-KENYA

Date:

When replying please quote

27<sup>th</sup> September, 2013

Our Ref: **NACOSTI/P/13/0728/69**

Ben Solomon Chekwanda  
Kabarak University  
P.O.Private Bag  
Kabarak.

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on "*Financial impact of devolved funds on economic growth in Kenya*," I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for a period ending **25<sup>th</sup> October, 2013**.

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

**DR. M. KRUGLI, Ph.D, HSC,  
DEPUTY COMMISSION SECRETARY  
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION**

Copy to:


The County Commissioner  
The County Director of Education  
Nairobi County.



### APPENDIX III

**THIS IS TO CERTIFY THAT**  
**MR. BEN SOLOMON CHEKWANDA**  
**OF KABARAK UNIVERSITY, 0-20100**  
**Nakuru, has been permitted to conduct**  
**research in Nairobi County**  
**on the topic: FINANCIAL IMPACT OF**  
**DEVOLVED FUNDS ON ECONOMIC**  
**GROWTH IN KENYA.**  
**for the period ending**  
**25th October 2013.**

**Permit No. : NACOSTI/P/13/0728/69**  
**Date Of Issue : 27th September, 2013**  
**Fee Received : Kshs ksh1000.00**



**Applicant's**  
**Signature**

*Mosquito*  
**Secretary**  
**National Commission for Science,**  
**Technology & Innovation**

# APPENDIX III

**CONDITIONS**

- 1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed without prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two (2) hard copies and one (1) soft copy of your final report.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

**REPUBLIC OF KENYA**

**NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION**

**RESEARCH CLEARANCE PERMIT**

**Serial No. A00313**

**CONDITIONS: see back page**

APPENDIX IV

ORIGINAL

National Commission for Science, Technology and Innovation

AG: 00178

### OFFICIAL RECEIPT

Station: Nairobi Date: 25/9/13

Received from: Ben Simon chekRande

Shillings: One thousand shillings only

Receipt fee

Note: R-43

Head: A.T.A

Item: A.T.A

Cash: Bank deposit

Signature of Officer receiving remittance

Kshy: 1000/-

AC: [Signature]

No: [Signature]

