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KELVIN GITARU FOREIGN AID ON GDP

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IMPACT OF FOREIGN AID ON ECONOMIC GROWTH OF KENYA

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Foreign aid is advanced by developed to developing economies, either for economic, political or humanitarian motives. According to the Organization for Economic Cooperation and Development (OECD), foreign aid refers to all grants and loans that are undertaken by the official sector with promotion of economic development or welfare as the main objectives, and with a grant element of at least 25%.

In developing nations; domestic savings rates are insufficient to provide the resources to meet desired levels of investments. Foreign exchange through export earnings is also inadequate to finance all the desired imports of capital goods as noted by (Hansen, Henrik, & Tarp, 2001). Consequently, such countries are constrained in their ability to achieve a target growth rate. Capital inflows, including aid, are meant to fill these gaps and contribute to achieving target growth rates. In this case, the contribution of aid is to finance investments, including imports of capital goods.

Early empirical work on the impact of aid on growth was based on this two gap model, often concentrating on the impact of aid on investment or savings rather than on growth.

A general hypothesis is that aid contributes to growth. But the debate on aid effectiveness has drawn mixed reactions among scholars and policy makers both in donor and recipient countries.

A paper by (Burnside & Dollar, 2004) is very influential on this debate. According to this paper, aid has a positive impact on growth in developing countries with good fiscal, monetary and trade policies but has little effect in the absence of good policies. Other works have reacted to these results showing that aid's effectiveness is not conditional on policy.

The endogenous growth theory that motivates most empirical work does not provide a direct link between aid and growth; rather, any potential impact of aid on growth is conditional on aid affecting a determinant of growth, such as investment. The role of

public investment in the growth process has received much attention in the recent years. It's agreed upon that there are several channels through which public investments can affect growth. First, public investments (particularly in infrastructure) may increase private capital formation and thus, the overall rate of accumulation of physical capital. But public investment may also displace private capital formation, and therefore reduce the economy's capacity to sustain a higher level of output.

Studies in most sub-Saharan African countries do not show a positive statistical relationship between aid receipts and growth. But elsewhere, aid has produced impressive results. UK & USA borrowed in the initial periods of their economic take-off (Akhand , Hafiz , Kanhaya , & Gupta, (2002)). UK financed much off her development in the 18th century by borrowing from cash rich Holland only to turn into a lender in the next century. These economies took advantage of such inflows to invest in the necessary social infrastructure. Unfortunately, there seems to be a missing link which is the main source of today's debt crisis in sub-Saharan Africa.

Literature on effectiveness of aid shows that any effect on growth is indirect. Less Developed Countries suffer from 3 constraints to growth which includes: limits on investment due to low savings, limited ability to import investment goods and fiscal constraints in investments. Aid can relax these three constraints by financing public investments, imports of capital goods and intermediate inputs. But for this to happen, aid that is given through the public sector need not be diverted to finance government consumption. Proper analysis of aid should therefore address all these interactions and take into account the transmission mechanisms.

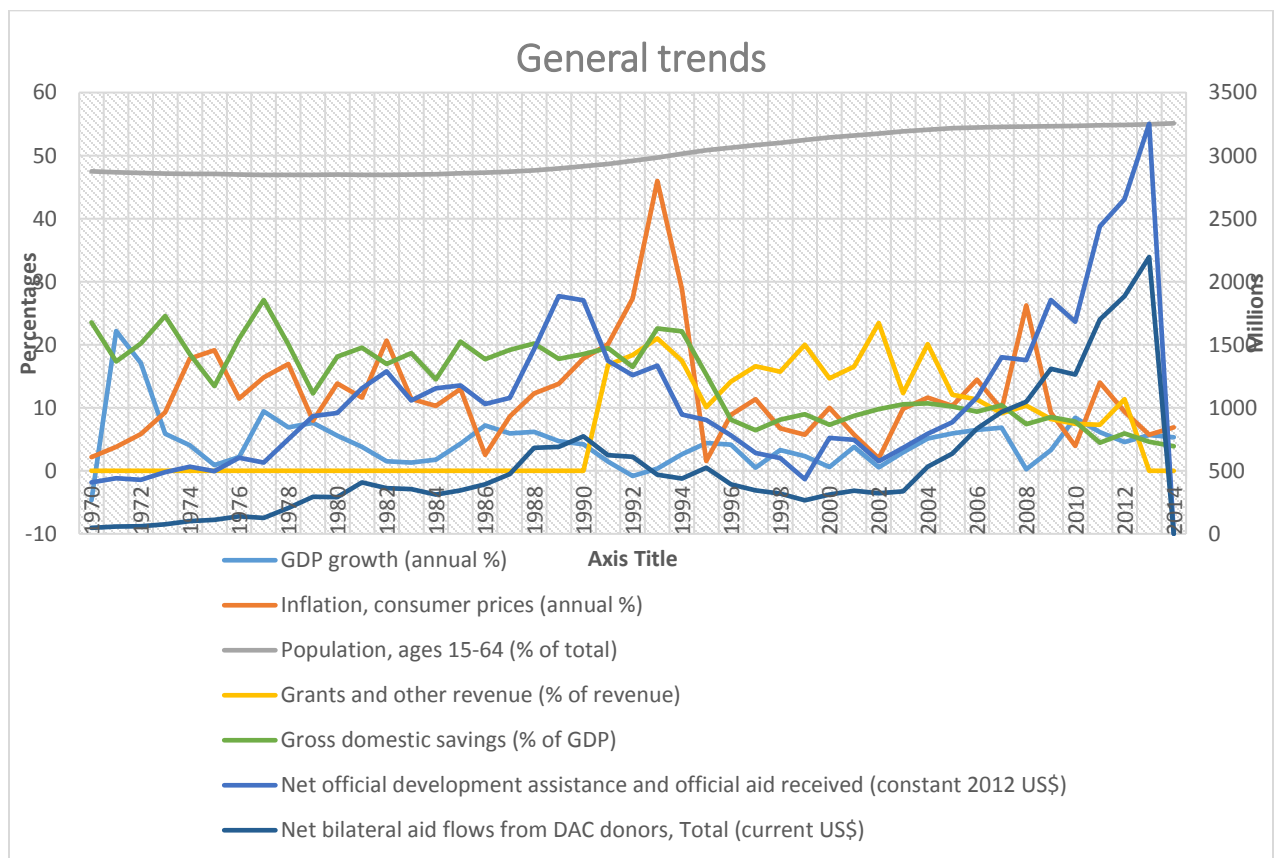
1.1.1 Evolution of Foreign Aid in Kenya

Kenya was a beneficiary of huge flows of foreign aid, yet the economy witnessed a progressive decline especially in the last two decades spanning 1982-2002 (development estimates). Rather than achieve objectives of growth, aid has tended to create overdependence on developed countries with an upward trend in public consumption rather than investment. It is argued that the ever-swelling public expenditures are fueled by foreign capital inflows, taxation, and domestic borrowings. The country's

development has depended heavily on aid. Infact, Kenya was the first SSA country to receive structural adjustment funding from the World Bank. Later, the IMF granted Kenya the enhanced structural adjustment facility (ESAF) loan. But more often than not, aid comes with donor prescriptions which do not reflect government priorities or prudent economic management. At times, the prescriptions are harmful to the welfare of the citizens. Statistics indicate that nominal aid flows during the 1970s and 1980s were high with a record high of over Ksh16 billion or 11.5% of GDP in the fiscal year 1989/90. In the late 1980s and early 1990s, donor support slackened(GoK, 1970-2000).

Donors have not been satisfied with Kenya’s domestic policy; consequently, there have been 3 aid freezes in 1992, 1997 and 2000 to pressurize the government to adopt political and economic reforms and rationalize public expenditures (GoK, 1970-2000).

Figure 1: General trend in macroeconomic variables in Kenya



According to figure 1 above, there was a steady increase in foreign aid during the 1970s and 1980s; a trend that continued until 1993 and slackened thereafter. During the period 1970-2002, foreign aid averaged about 9% of GDP. This constitutes about 20% of the

annual government budget with over 80% being spent on financing development activities. The share of grants has also been rising from an average of 46.7% in the 1970s to about 70% in the 1990s. During the 1980s and early to mid-1990's (GoK, 1970-2000) when donor support was high, the government implemented various market intervention programs which led to increased government expenditure. These were related to donor conditionality e.g. retrenchments and golden handshakes.

Kenya has also been receiving aid in kind in various forms such as drugs and food aid. Food aid is potentially a problem if Kenyans were to change their consumption preference. This would cause resource re-allocation in the long run. But then food aid is only a short gap measure coming during prolonged dry periods.

According to Kenya's expenditure review (2005), the government utilization of donor funds has been below average in recent years. Apparently, it is donor countries who decide whether Kenya is to receive aid, how much, in what form, for what purpose and under what conditions based on the donors' assessments. This creates problems given that Kenya's absorptive capacity for both domestic and external resources is generally low. Further, the requirements that donor funds be channeled through the exchequer, though important for accountability resulted in the problem of a huge portfolio of stalled and incomplete projects. This problem is due to long and tiresome bureaucratic procedures in the government systems.

1.2 Statement of the Problem

There is significant increase in foreign inflows, but the economic growth achieved by many Sub Saharan African countries has not been satisfactory. Thus, the actual role of foreign capital inflow has been an area of controversy. Kenya has been one of the major recipients of international aid. It is evident that despite notable donor intervention in the country's economy, less economic growth and poverty remain inherent for many years. Despite this paradoxical scenario, there are few researches capturing the attention of assessing the effectiveness of aid in such a country in order to find out whether aid has been effective, or whether, in fact, the persistent poverty in such an aid-dependent

country is not the result of the ineffectiveness of aid. So far done studies are controversial. The study by Abeba (2002) in Ethiopia for example shows that aid has negative impact on economic growth while the study by Tasew (2010) and Yohannes (2011) found that aid has positive impact on economic growth.

All developing countries, especially in sub-Saharan Africa, are faced with low savings and a narrow lent widening tax base. This problem is coupled by narrow and diminishing export earnings as a result of deteriorating terms of trade. Thus the requisite investments for pasture GDP growth are inadequate. This leads to dependence on external assistance in the hope that these external resources would fill the domestic savings and foreign exchange gaps. In this case, foreign aid is considered as an engine for growth. Today, Kenya is one of the poor countries that suffer from inordinately high foreign debt levels. The debt to GDP ratio in the period 1970-1980 stood at an average of 38.5% rising to 89.2% by 1991-99 periods (GoK, 1970-2000). Currently, foreign debt stands at about 1.1 trillion according to Quarterly Budget Reviews. Consequently, debt servicing is hampering the struggle for development and social justice. Much of the aid is not a donation towards development but loans that must be repaid with interest. There is therefore the need to determine how foreign inflows affect Kenya's economy.

Kenya was for a long time a recipient of foreign aid from both multilateral and bilateral agencies and as such, these resources were meant to help the country build the necessary economic and physical infrastructure for take-off. But the impact of foreign aid seems to be far from being felt in Kenya as evidenced by unimpressive GDP growth rates and entrenching poverty. There is therefore need to determine how aid translates to growth in Kenya.

1.3 Objectives of the study

This study seeks to:

- i. To estimate the impact of foreign aid on the economic growth of Kenya
- ii. To estimate the elasticity of economic growth to foreign aid

1.4 Research Hypothesis

H1: Foreign aid is significant to GDP growth at 5% Significance level

H0: Foreign aid is not significant to GDP growth at 5% Significance level

1.5 Justification for the study

Various studies have been done on the effectiveness of foreign aid for both cross-country & country specific cases. Previous country specific studies have considered regressions for aid on growth.

That approach does not take into account interactions between aid and other growth determinant variables. This study will therefore go further to estimate the impact of aid on growth through intermediate variables and focused on are government consumption & import.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section of the study is divided into two sections; the first section discusses the theoretical literature review while the second discusses the empirical studies conducted by other researchers on foreign aid.

2.2 Theoretical literature review

This segment tries to highlight the various theoretical works done by scholars in the field of foreign aid and growth. Daniel m' Amanja and Oliver Morrissey (2005) used country specific studies to analyze the relationship between foreign aid, investment, trade and economic growth in Kenya. They argued that cross country studies which form the backbone of the literature on the determinant of economic growth in developing countries faces various limitations. The main objective of their work was identifying aspects of economic growth in Kenya, in particular if aid played a role. They thus used a multivariate time series estimation approach to investigate some of the determinants of economic growth in a single small open economy. Vector Autoregressive Modelling was the thrust of their methodology. They came to the conclusion that foreign aid in the form of net external loans is found to have a significant negative impact on long run growth (Amanja and morrisey 2005).

Papanek (1973) used a cross-country regression to study 34 counties in the 1950;s and also 51 countries in the 1960;s whereby he treated foreign aid, foreign investments and other lows and domestic savings as explanatory variables of aa economic growth model. He came to the conclusion that foreign aid has a substantially greater impact on economic growth than the other variables. He thus concluded that aid unlike savings (dometric savings) can fill both the foreign exchange and savings gap.

Fayissa and El-kasissy (1999) studied 77 countries over the sub-periods of 1971-1980, 1981-1990, and 1971-1990. They used modern economic growth theories to point out that foreign aid, domestic savings, human capital and exports are positively correlated with economic growth in the studied countries.

2.3 Foreign Aid

Foreign aid is an international payment that consists of either a loan or a grant, from one country to another, these payments can either be bilateral, multilateral or private assistance from a nongovernmental organization (Todaro 2009, 728-729). The distinction between bilateral- and multilateral aid is that bilateral is a two-way stream meaning that it is sent from one government to the other whereas multilateral aid is given by a coalition of countries and/or organizations to a specific country (Todaro 2009, 728-729). Economists require that foreign aid has to be met by two criterions; the purpose of aid has to be non-commercial and concessional, both the repayment stage and the interest rate should be softer than commercial terms i.e. concessional terms (Todaro 2009, 728-729).

Burnside and Dollar's (2000) definition of aid excludes concessional loans and is therefore defined as the grant element of aid, in other words (EDA), Effective Development Assistance (Easterly 2003, 23-28). Development Assistance Committee (DAC) definition of foreign aid, can be described as Official Development Assistance (ODA). ODA is defined as inflows to countries and regions on the DAC list of ODA recipients and to multilateral development institutes, ODA has the following conditions: 1) Multilateral development institutions have to be provided by official agencies, which includes state and local governments, or by their policymaking agencies 2) Each transaction has to pursue the following principles; the main purpose of aid is to stimulate economic development and welfare in developing countries b) Is according to concessional loans, i.e. grant element of at least 25% (OECD 2003). Concessional loans are softer than market loans (Glossary of Statistical Terms 2003), the calculation (grant element of at least 25%) determines if loan are concessional or not (OECD 2003).

Generally, aid can be defined in diverse ways, in this study aid is defined as all international payments, through bilateral, multilateral or nongovernmental agreements. International payments consist of loans (in compliance with concessional terms) or endowments. Furthermore, developing countries, in this study, are defined as both low-income and middle income countries, that is to say countries that haven't reached development yet. It is therefore important to denote the different complications these countries faces.

The discussion concerning which of the two, bilateral or multilateral aid, is more efficient than the other is rather scarce. In some aspects multilateral aid might seem more of an altruistic motive than bilateral aid clearly regardless of what form of aid, aid stems from an altruistic motive (Ram 2003). However, bilateral aid tends to be more self-interest related than multilateral aid, on the basis of that a donor country can satisfy their own strategic and economic interests, also donor countries often support countries that they find having a connection with e.g. cultural and strategic ties that can be historical ties, trade relations or political connections (Ram 2003). On the other hand, multilateral aid has a greater outcome in recipient countries whenever emergency aid is in desperate need (Cassen 1994, 215-216).

2.3 Forms of Foreign Aid

It is important to disaggregate different forms of aid as they are likely to exert different macroeconomic effects on the recipient economies. For example Ouattara (2005) tested empirically the impact of different forms of aid on savings in aid recipient countries. He found that, in overall, project aid flows and food aid (excluding emergency and relief food aid) are associated with a reduction in domestic savings. On the other hand, financial programme aid and technical assistance grants did not appear to reduce domestic savings (Ouattara 2005).

There are four main forms of development aid which include project aid, financial programme aid, technical assistance, food aid and humanitarian aid or emergence relief (Riddell, 2007). However, White (1998) identified three major forms of aid which include project aid, programme aid (including food aid) and technical assistance. The subsections that follow briefly discuss these forms of aid and a detailed discussion will be in chapter three using Tanzanian context.

2.3.1 Project Aid

Though there has been a decline of ODA in form of project aid from the mid 1990s, ODA to specific projects still exist. Project aid is dominated by funds channelled to interventions in sectors such as health, education, rural development including agriculture, transport and power, housing, and water supply and sanitation. However, small amounts of project aid are channelled to industrial, mining, trade and cultural projects (Riddell 2007). Many ODA funded development projects aim at achieving

specific outputs by providing resources, skills and systems which the recipient country needs.

2.3.2 Programme Aid

Programme aid is defined by OECD as financial contributions not linked to specific activities (Riddell 2007). The programme aid is divided into two forms, the balance of payments (BOP) support and the budget support. Under the budget support, aid funds are provided to boost aggregate revenue and increase overall spending. Aid funds channelled to ministries of finance are termed as General Budget Support (GBS) while those channelled to particular sectors are termed as Sector Budget Support (SBS). Under the GBS, donors provide funds for implementation of development and poverty alleviating strategies paying attention to the capacity of the recipient governments to use funds efficiently.

2.3.3 Technical Assistance

Technical Assistance (TA) includes the provision of skills, knowledge know-how and advice. For many decades, technical assistance has also been provided in form of teaching staff mainly in primary and secondary education in developing countries. Furthermore, more specialized trainers have continually performed skills training functions to meet their needs and to achieve their immediate objectives. For example the London-based Overseas Development Institute (ODI) has been running its fellowship scheme for graduate economists and placing them in key ministries in developing countries (Riddell 2007). Despite this positive impact of TA, there have been several problems associated with it. Some of these problems include high costs of providing the TA (especially the consultancy costs).

2.3.4 Humanitarian Aid or Emergency Aid

The definition of humanitarian aid is defined according to its purpose, that is, ‘to save lives, alleviate suffering and enable those suffering to maintain (or retain) their human dignity during and in the aftermath of natural disasters and man-made crisis.’ Humanitarian aid has been successful in most cases in achieving its tangible outcomes such as saving lives, providing food to the hungry; healthcare and medicines to those vulnerable to acute disease in emergencies; and water, sanitation and shelter to those whose homes have been destroyed. However, the sustained internal conflicts in war prone

areas reduce resources to meet development objectives as more resources are directed to meet humanitarian needs (Riddell 2007).

2.3.5 Food Aid

Food aid comprises of programme food aid and humanitarian food aid. Programme food aid may relieve the foreign exchange constraint to the import of the necessary intermediate inputs or by providing fiscal resources through counterpart funds generated by the local sale of programme food aid. These resources can be used by the recipient country to invest in agricultural research and extension and improvement of rural infrastructure in particular. However, programme food aid may have Dutch disease effects on domestic food producers and thus hurting the food sector's competitiveness in the world markets (Barret, 1999).

2.4 Foreign Aid and Economic Growth

Different types of capital generate development for a country; therefore poor countries are in desperate need of capital. Six different types of capital are significant in order to produce growth, which are: human capital, physical capital, infrastructure, natural capital, public and institutional capital and knowledge capital (Sachs, 2006). However, through foreign aid developing countries process towards development can increase since aid can generate human capital accumulation, economic growth and growth in household income (Sachs, 2006). Aid to households often occurs in droughts and come in form of food, while aid to the private-sector supports small business, although most commonly aid goes to government budget in order to finance public investments (Sachs, 2006).

According to Jeffrey Sachs (2006) developing countries (in particular poor countries) need a "big push", i.e. assistance from already developed countries. Sachs (2006) infers that inflow of total aid in both the productive and social sectors will result in growth to all sectors in the society, this idea generates from the theory of "poverty trap" which is a stage of low productivity that prevents poor countries from growing. Sachs, theory of the "big push" spawns from countries being too poor to save for the future and therefore becoming trapped in low or even negative growth rates (Sachs 2006). Thus both Boone and Easterly tested this theory, which appeared to have several flaws. According to Easterly (2006) in-between the years 1970 and 1994 hundreds of billions of dollars was

spent on public investments yet the growth rates didn't expand according to the "big-push" theory.

2.4.1 Physical Capital

Investments in real capital generate different positive effects on a country's economic growth. Cooperations, machines and land are different types of real capital. Investors in firms tend to strive for profit maximization, which in turn generates a received return. However the outcome of profit maximization, for most parts, results in lump sum that scatters over years, therefore a calculation of the 'present value' is required. This calculation indicates that if the cost is greater than the present value the investment will be unprofitable (Carlin and Soskice 2006).

Investments in land, in particular agriculture, establish labour that in turn spawns to balance of payments and political progress (Ray 1998). The link between physical capital and economic growth is financial aid, financial aid functions in good policy governments. Financial aid has several significant outcomes such as, poverty reduction, faster growth and improves social indicators in countries with sound economic management (World Bank 1999). Financial aid in countries with sound management results in a great outcome, 1 % aid in GDP will result in a 1 % reduction in poverty and infant mortality. On the other hand in environments with weak policies money has a smaller impact on the recipient country due to the government's circumstances (World Bank 1998).

2.4.2 Education

Robert Lucas developed the indication that input in present time can create more productivity in the future, i.e. investing in education will in the long run produce more efficiency. Investing in human capital accumulation will have a huge influence on the economy in the long run due to the fact that highly skilled workers contribute to successful businesses. If education rate increases, production will also increase in the long run, i.e. constant return to scale. Education is an endogenous factor because input inside the model will increase the output, that is to say more hours spent on studying will generate a higher permanent growth rate. Furthermore Lucas continues stating that human capital has an external effect in the sense that, human capital accumulation creates

returns, though the social return to human capital is greater than the individual return (Carlin and Soskice 2006).

Financing aid in education result in various positive effects such as increased government spending and other projects should progress, though if aid is fungible evaluating aid efficiency is complex (World Bank 1998). Education is important when it comes to state development: concerning individual lives education has a high return rate in form of investment and educations value branches into family planning, health, agriculture, industries and government (Cassen 1994). Although education is a long process the outcome is long-term and crucial meaning that the later the start the longer it takes to reach the satisfactory levels. Aid programs that finance aid have been successful referring to physical outputs such as schools built and numbers of enrolment, improving the effectiveness of aid towards education results in solving long-lasting problems (Cassen 1994).

2.5 Empirical Literature Review

Much of the empirical literature review attempts to analyze the effects of foreign aid on economic performance using statistical models and aggregate data on economic and foreign aid variables for various countries. (Wamuthenya, 1998) analyzed aid and growth in Kenya over 1970-1995 and estimated the following 4 equations using OLS;

RGDP = F(INGDP, GLF, TOT, D84).....	3
RGDP = F(AIDGDP, GLF,SAVGDP,TOT, D84).....	4
RGDP = F (AIDGDP, GLF, SAVGDP, TOT, D84, PV).....	5
RGDP = F(AIDGDP, GLF, SAVGDP, TOT, D84, PV,PV. AIDGDP).....	6

Where; INVGDP= investment to GDP ratio

RGDP = growth rate of GDP

AIDGDP= ratio of foreign aid to GDP

GLF= growth rate of labor force

SAVGDP= ratio of savings to GDP

TOT= terms of trade

D84= dummy for 1984 drought

PV= domestic policies variable and;

PV.AIDGDP = interaction term

Her conclusion was that real investment has a positive impact on growth in Kenya while aid significantly reduced growth in the study period. (M’Amanja, Lloyd , & Morrissey, 2005) conducted a study to find out whether or not fiscal policy stimulates growth in Kenya. They used annual data between 1964 and 2002 and formulated an Autoregressive Distributed Lag (ADL) model which they present in the following term;

$$A(L) Y_t + \alpha + B(L) X + \epsilon_t \dots\dots\dots 7$$

where;

$$A(L) = 1 - \alpha_1 L - \alpha_2 L^2 \dots\dots\dots + \alpha_p L^p \dots\dots\dots 8$$

$$B(L) = \beta_0 + \beta_1 L + \beta_2 L^2 + \dots\dots\dots + \beta_q L^q \dots\dots\dots 9$$

And P_1, q are polynomial lag lengths , $A(L)$ and $\beta (L)$ are polynomial lag operators, L is the lag operators, L is the lag operator such that $L^p Y_t = Y_{t-p}$ and ϵ_t are white noise residuals.

They used expenditures, revenue, budget deficit, investment, school enrollment and foreign aid trends as exogenous variables. Rather than use DAC (Development Assistant Committee) data on foreign aid, they used data from Kenya economic surveys. Their analysis show that foreign aid (grants) have a negative relationship with per capita output. The aid coefficient in all those 4 long-run models estimated a negative sign. The conclusion from their findings is that for aid to be effective in promoting investment and growth in Kenya, it must be tied to carefully selected and monitor able development projects and programs. The macroeconomic and governance environment must be right and flow of aid more reliable and predictable. (Ouattara, 2006) analyzes the effects of aid flows on key fiscal aggregates in Senegal.

This paper utilizes data over the period of 1970 – 2000 and primarily focuses on the interaction between aid and debt. The author determined three main outcomes of his study. First, that a large portion of aid flows, approximately 41%, are used to finance Senegal’s debt and 20% of the government’s resources are devoted to debt servicing. Second, that the impact of aid flows on domestic expenditures is statistically insignificant, and third, that debt servicing has a significant negative effect on domestic expenditure. As a result, his paper suggests that debt reduction could become a more successful policy tool than obtaining additional loans.

(Elbadawi, Ibrahim , & Mwege, 1999) studied saving behavior in SSA countries using cross-sectional data. The study established that foreign aid causes a reduction in both savings and investments. Investment also causes an increase in foreign aid, so that African countries that increase investment receive more aid. The fixed-effect results for the region also show that the foreign aid ratio significantly causes a reduction in the saving rate as expected from the permanent income hypothesis provided that aid is not entirely wasted. There is no significant by aviate relationship between aid and growth in the long–run as the Solow model predicts. Fixed effects also show that foreign aid ratio and the investment rate cause one another at least at the 100% level.

A study by (Karras, 2006) investigates the correlation between foreign aid and growth in per capita GDP using annual data from 1960 to 1997 for a sample of 71 aid-receiving developing countries. This paper concludes that the effect of foreign aid on economic growth is positive, permanent, and statistically significant. More specifically, a permanent increase in foreign aid by \$20 per person results in a permanent increase in the growth rate of real GDP per capita by 0.16 percent. These results are obtained without considering the effects of policies.

(Quartey, 2005)research focuses on innovative ways of making financial aid effective in Ghana. The author concluded that mainly MDBS (multi-donor budgetary support) could be successful, but only if the government of Ghana and its partners plan better and coordinate their efforts. Moreover, the government needs to work on reducing its debt burden, so it would not use its aid inflows to service its debt. The author suggests that the MDBS cannot be fully successful until it is entirely synchronized with other forms of project aid and until the inflows become more predictable.

In his research, (Ram, 2004), looks at the issue of poverty and economic growth from the view of a recipient country’s policies as being the key role in the effectiveness of foreign aid. Nevertheless, in his paper the author disagrees with the widely-acknowledged view that redirecting aid toward countries with better policies leads to higher economic growth and poverty reduction rates. As a result, based on his research the author concludes that

evidence is lacking to support the leading belief that directing foreign assistance to countries with good ‘policy’ will increase the impact on growth or poverty reduction in developing countries.

2.6 Summary of the Literature

Foreign aid has become an integral part of development planning in most developing countries. Based on the literature review, it emerges that there is no universally accepted view of foreign aid effectiveness. Some studies show that foreign aid has had a positive effect while others have shown either negative or no effect on GDP growth especially in SSA.

Overdependence on donor assistance to counter macroeconomic imbalances has cost recipient countries a lot since those flows are volatile and unpredictable. Effectiveness of aid is conditional on factors both in recipient and donor countries. A striking feature in the literature is that more assistance is not always more effective. Receiving too much foreign aid may overwhelm a country’s absorption capacity and thereby undermine the aids overall effectiveness. Yet even small quantities can be useful in achieving results, depending on its purpose and how it’s spent.

Most of the studies agree that foreign aid is effective in countries with sound macroeconomic environments and good governance structures. But some insist that aid promotes growth, and that this conclusion is not conditional on the policy environment. Thus, there seems to be a lot of controversial issues between proponents and opponents of foreign aid. Again, most of the studies done are not country specific. Donor conditionality was never formulated for specific countries but for Less Developed Countries across the board. Thus more work need to be done once a country to country basis to shed some light on specific cases.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter of the study discusses the methodology that was used in estimating the impact of foreign aid on economic growth, and the elasticity of economic growth to foreign aid. The chapter also discusses the type of data that was used in this study and a description of their sources. The chapter is divided into two major sections; section one and two discuss the theoretical and empirical framework behind this study respectively.

3.2 Research Model

This section discusses the basic framework of the model that was used in this study. The model is derived, in conventional manner, from a production function in which foreign aid is introduced as an input in addition to labor and domestic capital. In the usual notation the production function can be written as follows:

$$Y=f(L,K,A).....1$$

Where Y is gross domestic product (GDP) in real terms, L is labor input, K is domestic capital stock, and A is stock of foreign aid.

Assuming (1) to be linear in logs (deriving elasticity), the following expression describes the determinants of the growth rate of real GDP is obtained:

$$y=b_0+b_1l+b_2k+b_3a+e.....2,$$

where lower case letters denote the rate of growth of individual variables. Following the precedent set in numerous previous studies, the rate of growth of the capital stock is approximated by the share of investment in GDP. In addition, the rate of change in labor input is also replaced by the growth rate of population (Karras, 2006).

3.3 Data Analysis

This study will use a multiple linear regression model to estimate the impact of foreign aid on economic growth of Kenya. Following (Karras, 2006) and others, several other variables that are often believed to have a favorable effect on growth are also included in

the regression model, to be. The data used for this analysis was a mixture of rates and nominal values, as such the model was further transformed to be:

$$\text{GDP}_t = \beta_0 + \beta_1 \text{SE}_t + \beta_2 \text{EXP}_t + \beta_3 \text{IMP}_t + \beta_4 \text{AID}_t + \beta_5 \text{GCF}_t + \varepsilon_t \dots \dots \dots 15$$

Where GDP is the annual GDP growth rate, SE_t is school enrollment as a percentage of the whole population, EXP_t is the exports as a percentage of GDP, IMP_t is the rate of import, AID_t(% of GDP), GCF_t is the Gross Capital Formation measured by the total value of the gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables.

3.4 Data type and source

This study uses a secondary time series data, which is obtained from the World Bank development indicators and Statistical Abstract of Kenya.

3.5 Tests of Data

Before regressing the data, it will be tested for significance and if the variables under study are not significant, different variables affecting economic growth will be used in the regression model.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter discusses findings that were obtained in the analysis, using the methodology that was discussed in chapter three above. The chapter discusses the summary statistics of the variables that were used and the other statistical measures of the variables.

4.2 Summary statistics

Table 4.1: Summary statistics

Variables	Obs	Mean	Std.dev	Min	Max
GDPt	45	3.490726	5.325368	-3.15545	18.14589
EXPt	45	11.2344	6.25628	1.354328	46.97888
IMPt	45	49.28493	2.240152	43.93562	45.11824
SEt	45	21.70305	0.531721	15.82494	21.90256
AIDt	45	15.27417	7.232233	2.895554	27.08909
GCFt	45	17.79092	0.835508	15.6584	11.5097

Source: Authors 2016

From table 4.1; averagely in the years under study, the minimum GDP annual growth rate is -3.155%, and the maximum GDP growth is 18.15%, showing a large deviation from the mean. For all the other variables under study, the standard deviations are small, this implies that all the variables under study were not far from their mean values.

4.3 Regression Analysis

Table 4.3: ANOVA Table

a. All requested variables entered.

Table 4.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.7879 ^a	.7802	.7829	40.3056836

a. Predictors: (Constant), SEt, EXPt, GDP, IMPt, AIDt (% of GDP), GCFT

From the table above, Adjusted R square measures the proportion of the variance in the dependent variable (GDP growth rate) that was explained by variations in the independent variables. i.e adjusted R square shows that 78.79% of the variance was explained. R square measures the proportion of the variation in the dependent variable (GDP growth rate) that was explained by variations in the independent variables. In the table above, the R-Square shows that 78.02% of the dependent variable was explained by the independent variables. Standard error of the estimate measures the dispersion of the dependent variables estimate around its mean.

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	26466.215	4	6616.554	4.073	0.021 ^a
Residual	22743.674	41	1624.548		
Total	49209.889	45			

a. Predictors: (Constant), SEt, EXPt, GDP, IMPt, AIDt (% of GDP), GCFT

b. Dependent Variable: GDP Growth rate

Test results Using ANOVA

F-calculated (4.073) is greater than F-critical (0.021)

Conclusion: We reject Null hypothesis, hence foreign aid is significant on the GDP growth rate at 5 % significance level.

Table 4.4: Regression Results

Variables	Coefficients	Standard Error	t-statistic	Prob.
EXPt	1.163829	0.163510	7.117772	0.0000

IMPt	-0.662263	0.401668	-1.648782	0.1122
SEt	2.665063	0.752337	3.542379	0.0017
AID	-1.629785	0.861549	1.891690	0.0707
GCFt	1.3204	0.34679	1.2361	0.0045
C	-2.67E+11	2.07E+12	-0.128836	0.8986
AR(1)	1.010085	0.071176	14.19140	0.0000

R= 0.7879; Adj. R2 = 0.7829; D.W = 1.8014; F- Test = 335.2154; Prob (F-Stat) = 0.0000

Table 4.4 depicts the result of long-run impact of foreign aid on economic growth. Furthermore, the result indicates that the coefficient of determination (adjusted R) is 0.9859 meaning that over 98% variation in GDP is accounted for by the explanatory variables in the model. The prob(F-statistic) of 0.001 shows an overall goodness of fit of the model. Imports have negative effect on the GDP growth rate and it's negatively correlated to GDP growth rate. Gross capital formation also has a negative effect on the GDP growth rate or it's negatively correlated to GDP growth rate. This could be attributed to the fall in capital stock (actual de-investment due to wearing out of capital).

The Durbin Watson (D.W) statistics of 1.8 shows the absence of auto- correlation or first order serial correlation. In terms of the signs of the coefficients, it can be seen that all the variables concur with a priori theoretical expectation. The coefficients of export and investment (1.16 and 2.67 respectively) exhibit a positive and significant trend which suggests that Kenya's GDP depends on investment and export in the longrun.

4.4 Correlation of the Variables

Table 4.5 Correlation of the Study Variables

Correlations		SEt	EXPt	IMP	AIDt	GCF
SEt	Pearson Correlation	1	.657**	704(**)	.643**	.530**
	Sig. (2-tailed)	.000	.000	.000	.0000	.000
EXPt	Pearson Correlation	.657**	1	.241**	.213*	.289**
	Sig. (2-tailed)	.000	.000	.000	0.000	.000
IMP	Pearson Correlation	.530**	.289**	1	.306**	.215**
	Sig. (2-tailed)	.000	.000	.000	.412*	.000
AIDt	Pearson Correlation	.412**	.409**	.406*	1	.642**
	Sig. (2-tailed)	.000	.000	.000	0.000	.000
GCFt	Pearson Correlation	.657**	1	.241**	.289**	1
	Sig. (2-tailed)	.000	.003	.001	0.002	.000

** Correlation is significant at the 0.01 level (2-tailed).

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

SEt represents school enrollment as a percentage of the whole population, EXPt is the exports as a percentage of GDP, IMPt is the rate of import, AIDt(% of GDP) , GCFt is

the Gross Capital Formation measured by the total value of the gross fixed capital formation, changes in inventories and acquisitions less disposals of valuables.

Table 4.5, shows no signs of correlation between GDP and all the variables that explain it in this model. This indicates less signs of multi-collinearity between GDP and its explanatory factors. Though this is the case, there is some notable positive correlation between the other variables, especially population growth rate and levels of foreign aid, implying as the exports increases due to investment of foreign aid locally, growth increases.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of the findings, conclusion, recommendations and suggested areas for future study.

5.2 Discussion of the findings

The result of this study is not surprising as it supported the Harrod-Domar model which proved that the growth rate of national income will directly or positively be related to saving ratio and investment (Bakare, 2011). Import and foreign aid exhibit a negative and non-significant value of -0.66 and -1.63 respectively. The implication of this result is that foreign aid to Kenya has not been effectively managed to promote investment and growth in the economy. This may be as a result of corruption or aid fungibility (aid not used for the purpose intended by donors) as observed by Papanek (1973), Bakare (2011) and Ayodele et al (2005). The result also indicates the normal distribution of the residuals. The Lagrange Multiplier (LM) test of no error autocorrelation suggests that the residuals are not serially correlated.

5.3 Conclusion

The results showed that there is a positive impact of foreign aid to economic growth of Kenya. Where a one percent prior years' foreign aid in Kenya leads to over four percent increase in current year's GDP growth rates. The positive impact imply that foreign aid in Kenya has been productively been used in projects and developmental issues, where the effect has trickled down to the gross domestic product of the country after an earlier year of investments.

The aspect of the R statistics implies changes in GDP of Kenya are explained more by other variables which were not included in this model, implying it cannot be generally be concluded that the variables under study are the main factors affecting GDP in Kenya.

5.4 Recommendations

The results of the study show that foreign aid is an important variable for spurring economic growth for the country and as such the country should appeal for more foreign aid. In order to reap from it, the aid should be used for productive activities whose effect will be felt in the GDP growth rates.

The researcher suggests the establishment of strong constitutional reforms to address the problem of pervasive corruption in Kenya and improve the quality of governance hence transparent and quality management of foreign aid. More so it is advisable for donor countries to monitor the implementation and effective use of foreign aid to avoid aid misappropriations.

Finally, sound macro-economic policies should be put in place to ensure that foreign aid flows are invested into developmental projects that will boost the nations GDP and reduce the level of poverty in the country. This is because without these political, economic and institutional reforms, the large inflow of foreign aid will be effort in futility.

5.5 Suggested areas for future study

A more comprehensive study should be conducted to identify other factors that might be affecting economic growth in Kenya. Future research should further explore the role of sound economic policies and good governance in aid effectiveness. Scholars should also explore other ways of quantifying climate, tropical geography, and governance to provide for additional testing of potential impacts on the effectiveness of foreign aid. Finally, future study of foreign aid should also investigate its effects on economic development, instead of growth. Doing so will shed light on the question of whether aid actually improves the quality of life in lesser developed countries.

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